DEPARTMENT OF ENVIRONMENTAL CONSERVATION

AIR QUALITY OPERATING PERMIT

Permit No. 171TVP01
Application No. 171
Minor Revision 1, April 18, 2003

Issue Date: December 2, 2002
Expiration Date: January 1, 2008

The Department of Environmental Conservation, under the authority of AS 46.14 and 18 AAC 50, issues an operating permit to the permittee, **Phillips Alaska Inc**, for the operation of the **Kuparuk Central Production Facility #3**.

This permit satisfies the obligation of the owner and operator to obtain an operating permit as set out in AS 46.14.130(b).

As set out in AS 46.14.120(c), the permittee shall comply with the terms and conditions of this operating permit.

All facility-specific terms and conditions of Air Quality Control Permit-to-Operate 9373-AA006 and Air Quality Control Construction Permit No 171CP01 have been incorporated into this Operating Permit.

This Operating Permit becomes effective January 2, 2003.

John F. Kuterbach, Manager

Air Permits Program

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List of Abbreviations Used in this Permit

AAC .....Alaska Administrative Code
ADEC.....Alaska Department of Environmental Conservation
AS.....Alaska Statutes
ASTM.....American Society for Testing and Materials
BACT.....Best Available Control Technology
C.F.R. .....Code of Federal Regulations
CO.....Carbon Monoxide
dscf.....Dry standard cubic foot
EPA.....US Environmental Protection Agency
gr./dscf.....grain per dry standard cubic foot (1 pound = 7000 grains)
GPH.....gallons per hour
HAPs or HACs.....Hazardous Air Pollutants or Hazardous Air Contaminants [*HAPs* or *HACs* as defined in AS 46.14.990(14)]
ID.....Source Identification Number
kPa.....kiloPascals
MACT .....Maximum Achievable Control Technology as defined in 40 C.F.R. 63.
MR&R.....Monitoring, Recordkeeping, and Reporting
NESHAPs.....Federal National Emission Standards for Hazardous Air Pollutants *[NESHAPS* as contained in 40 C.F.R. 61 and 63]
NO_X.....Nitrogen Oxides
NSPS.....Federal New Source Performance Standards [*NSPS* as contained in 40 C.F.R. 60]
ppm and ppmv.....Parts per million (by volume on a dry basis)
PM-10 .....Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers.
PS .....Performance specification
PSD .....Prevention of Significant Deterioration
RM.....Reference Method
SIC. .....Standard Industrial Classification
SO_2.....Sulfur dioxide
TPH .....Tons per hour
tpy.....Tons per year
VOC .....volatile organic compound [*VOC* as defined in 18 AAC 50.990(103)]
wt%.....weight percent

Section 1. Identification

Names and Addresses

Permittee: **Phillips Alaska Inc**
P.O. Box 100360
Anchorage, AK 99510-0360

Facility Name: **Kuparuk Central Production Facility #3**

Location: Sections 10 and 15, T12N, R9E, Umiat Meridian

Physical Address: Kuparuk Oil Field

Owners:

Phillips Alaska Inc.
700 G Street
P.O. Box 100360
Anchorage, AK 99510-0360

Exxon Company, USA
800 Bell Street, Room 2917
P.O. Box 2180
Houston, TX 77252-2180

BP Exploration (Alaska) Inc
900 E. Benson Blvd.
P.O. Box 196612
Anchorage, AK 99519-6612

Union Oil Company of California
909 West 9th Ave
P.O. Box 190247
Anchorage, AK 99519-0247

Chevron USA Production Co.
P.O. Box 1635
Houston, TX 77251

Mobil Oil Corporation
12450 Greenspoint Drive
Houston, TX 77060-1991

Operator: Phillips Alaska Inc
P.O. Box 100360
Anchorage, AK 99510-0360

Permittee's Responsible Official: Tom Wellman, GKA Field Manager

Designated Agent: United States Corporation Company
Juneau, AK

Facility and Building Contact: Randy Black / Jeff Huber
(907) 659-7682

Fee Contact: Thomas W. Manson
(907) 263-4627
Tom.W.Manson@conocophillips.com

SIC Code of the Facility:

1311 - Crude Petroleum and Natural Gas Production, NAICS Code of the Facility - 211111

[18 AAC 50.350(b), 1/18/97]

Section 2. General Emission Information

Emissions of Regulated Air Contaminants, as provided in the permittee's application:

Nitrogen Oxides, Sulfur Dioxide, Particulate Matter (PM-10), Carbon Monoxide, and Volatile Organic Compounds

Operating Permit Classifications:

1. 18 AAC 50.325(b)(1) Facility has potential to emit more than 100 tpy of a regulated air contaminant
2. 18 AAC 50.325(b)(3) Facility has a source subject to new source performance standards
3. 18 AAC 50.325(c) Facility described in 18 AAC 50.300 (b)-(e)

Facility Classifications as described under 18 AAC 50.300(b)-(f):

1. 18 AAC 50.300(b)(2) Facility contains equipment with a rated capacity of 100 million Btu per hour or more
2. 18 AAC 50.300(c)(1) Facility has a potential to emit 250 tpy of a regulated air contaminant in an area designated attainment or unclassifiable for that air contaminant under 18 AAC 50.015

[18 AAC 50.350(b)(1), 1/18/97]

Section 3. Source Inventory and Description

Sources listed in Table 1 have specific monitoring, record keeping, or reporting conditions in this permit. Source descriptions and ratings are given for identification purposes only.

Table 1 - Source Inventory

ID	Tag No.	Source Name	Source Description	Rating/size	Commenced Construction/ Startup/ Modification Date[1]
Gas Turbines					
1	C-EF01-A	GE Frame 3 (MS3002K-HE) Gas Lift Compressor		16,260 hp ISO	10/02
2	C-EF01-B	GE Frame 3 (MS3002K-HE) Gas Lift Compressor		16,260 hp ISO	4/03
3	G-EF01-A	EGT (Ruston) TB5000 Electric Generator		4,900 hp ISO	8/84
4	P-EF52-A	EGT (Ruston) TB5000 Water Injection Pump		4,900 hp ISO	8/84
5	P-EF52-B	EGT (Ruston) TB5000 Water Injection Pump		4,900 hp ISO	8/84
6	G-EF03	GE Frame 5 Electric Generator		35,400 hp ISO	1996
Dual-Fuel Fired Heaters					
7	H-EF03	Broach Emergency Heater (Standby Unit)		48.5 MMBtu/hr	4/85
Gas-Fired Heaters (Excluding Drill Site Heaters)					
8	H-EF04	Howe-Baker Fuel Gas Heater		5.6 MMBtu/hr	1/86
Diesel-Fired Equipment					
9	P-EF24B	Caterpillar Emergency Fire Water Pump		430 hp	11/84
10	P-EF53	GM Detroit Allison Emergency Seawater Booster Pump		270 hp	9/84
Flares					
11	H-EF01B	McGill Emergency Flare		0.6 MMscf/day (Pilot/Purge/Assist) Combined total for all flares	11/86
12	H-EF02B	McGill Emergency Flare			11/86
13	H-EF05	Kaldair Process Control Flare			10/93
14	H-EF06	Kaldair Emergency Flare			10/93
Other Equipment (Drill Site Heaters)					
15	H-3A01	CE NATCO Drill Site Heater (3A)		19.6 MMBtu/hr	12/85
16	H-3B01	CE NATCO Drill Site Heater (3B)		19.6 MMBtu/hr	6/85
17	H-3C01	CE NATCO Drill Site Heater (3C)		19.6 MMBtu/hr	8/85
18	H-K06-01	CE NATCO Drill Site Heater (3G)		19.9 MMBtu/hr	1988
19	H-K02-01	BS&B Drill Site Heater (3H)		19.9 MMBtu/hr	12/87
20	H-3I01	CE NATCO Drill Site Heater (3I)		19.6 MMBtu/hr	7/85
21	H-3J01	CE NATCO Drill Site Heater (3J)		19.6 MMBtu/hr	12/85
22	H-3K01	CE NATCO Drill Site Heater (3K)		19.6 MMBtu/hr	7/85
23	H-K01-01	BS&B Drill Site Heater (3M)		19.9 MMBtu/hr	7/85
24	H-3N01	CE NATCO Drill Site Heater (3N)		19.6 MMBtu/hr	7/85
25	H-K03-01	BS&B Drill Site Heater (3O)		19.9 MMBtu/hr	7/88
26	H-3Q01	CE NATCO Drill Site Heater (3Q)		19.6 MMBtu/hr	7/85
27	H-K07-01	CE NATCO Drill Site Heater (3R)		19.9 MMBtu/hr	1990
Fixed Roof Storage Tanks (>10,000 gallon capacity)					
28	T-EF03	Arctic (#1) Diesel		1,000 bbls	6/85
29	T-EF20	Ethylene Glycol (80/20 EG/H_2O)		500 bbls	Unknown[2]
30	T-EF62	Ideal Plus (Lube Oil)		293 bbls	Unknown[2]
31	KP-4122	Ucartritherm (60/40 TEG/ H_2O)		424 bbls	10/84
32	T-3A01	Methanol		580 bbls	9/85
33	T-3B01	Methanol		813 bbls	9/85
34	T-3C01	Methanol		813 bbls	9/85
35	T-3G01	Methanol		870 bbls	1988
36	T-3H01	Methanol		870 bbls	After 1984
37	T-3J01	Defoamer (DF-656)		580 bbls	9/85
38	T-3K01	Methanol		675 bbls	9/85
39	T-XX02	Methanol		630 bbls	9/85
40	T-3N01	Methanol		675 bbls	9/85
41	T-3O01	Methanol		630 bbls	3/87
42	T-EF01	Slop Oil		10,445 bbls	6/85

1-Date construction commenced (if known) or the startup date of the unit. If a unit has been modified as defined by AS 46.14.990, then the most recent modification date is provided. Relocation of drill site heaters does not constitute a modification.
2-PAI assumes NSPS Subpart Kb applies.

Section 4. Emission Fees

1. Assessable Emissions. The permittee shall pay to the department an annual emission fee based on the facility's assessable emissions as determined by the department under 18 AAC 50.410. The assessable emission fee rate is set out in 18 AAC 50.410(b). The department will assess fees per ton of each air contaminants that the facility emits or has the potential to emit in quantities greater than 10 tons per year. The quantity for which fees will be assessed is the lesser of

1.1 the facility's assessable potential to emit of 3,355 tpy; or

1.2 the facility's projected annual rate of emissions that will occur from July 1 to the following June 30, based upon actual annual emissions emitted during the most recent calendar year or another 12 month period approved in writing by the department, when demonstrated by

a. an enforceable test method described in 18 AAC 50.220;

b. material balance calculations;

c. emission factors from EPA's publication AP-42, Vol. I, adopted by reference in 18 AAC 50.035; or

d. other methods and calculations approved by the department**.**

[18 AAC 50.346(a)(1), 5/3/02]

2. Assessable Emission Estimates. Emission fees will be assessed as follows:

2.1 no later than March 31 of each year, the permittee may submit an estimate of the facility's assessable emissions to ADEC, Air Permits Program, ATTN: Assessable Emission Estimate, 410 Willoughby Ave., Juneau, AK 99801-1795**;** the submittal must include all of the assumptions and calculations used to estimate the assessable emissions in sufficient detail so the department can verify the estimates, or

2.2 If no estimate is received on or before March 31 of each year, emission fees for the next fiscal year will be based on the potential to emit set forth in condition 1.1.

[18 AAC 50.346(a)(1), 5/3/02]

Section 5. Source-Specific Requirements

Fuel-Burning Equipment

3. Visible Emissions. The permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from Source ID(s) 1 through 27 listed in Table 1 to reduce visibility through the exhaust effluent by either

a. more than 20% for more than three minutes in any one hour[1], or

[18 AAC 50.055(a)(1), 1/18/97 & 40 CFR 52.70, 11/18/98]

b. more than 20% averaged over any six consecutive minutes[2].

[18 AAC 50.055(a)(1), 5/3/02]

3.1 For Source ID(s) 1 through 6, 8, and 15 through 27 burn only gas as fuel. Monitoring for these sources shall consist of an annual certification that each of these sources fired only gas.

3.2 For Source ID 7 when operated on gas, monitoring shall consist of an annual certification that the source fired only gas. If Source ID 7 is operated on liquid fuel for more than 400 hours in a calendar year monitor, record and report in accordance with conditions 70 and 71.

3.3 For Source ID(s) 9 and 10, as long as they do not exceed the thresholds in condition 3.4, monitoring shall consist of an annual certification of compliance with the opacity standard.

3.4 For Source ID 9 when operated (emergency or non-emergency) for more than 275 hours in one calendar year or for Source ID 10 when operated (emergency or non-emergency) for more than 440 hours in one calendar year, the permittee shall perform a Method 9 visible emissions observation in accordance with conditions 70 and 71.

3.5 For Source ID(s) 11 through 14 (flares), monitor, record and report in accordance with condition 73.

[18 AAC 50.350(g) - (i), 1/18/97 & 18 AAC 50.346(c), 5/3/02]

4. Particulate Matter. The permittee shall not cause or allow particulate matter emitted from Source ID(s) 1 through 27 listed in Table 1 to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

[1] For purposes of this permit, the "more than three minutes in any one hour" criterion in this condition and condition 31.1 will no longer be effective when the Air Quality Control (18 AAC 50) regulation package effective 5/3/02 is adopted by the U.S. EPA.

[2] The six-minute average standard is enforceable only by the state until 18 AAC 50.055(a)(1), dated May 3, 2002, is approved by EPA into the SIP at which time this standard becomes federally enforceable.

4.1 For Source ID(s) 1 through 6, 8, and 15 through 27 burn only gas as fuel. Monitoring for these sources shall consist of an annual certification that each of these sources fired only gas.

4.2 For Source ID 7 when operated on gas, monitoring shall consist of an annual certification that the source fired only gas. If Source ID 7 is operated on liquid fuel for more than 400 hours in a calendar year monitor, record and report in accordance with condition 72.

4.3 For Source ID(s) 9 and 10, as long as they do not exceed the thresholds in condition 4.4, monitoring shall consist of an annual certification of compliance with the particulate matter standard.

4.4 For Source ID 9 when operated (emergency or non-emergency) for more than 275 hours in one calendar year or for Source ID 10 when operated (emergency or non-emergency) for more than 440 hours in one calendar year, the permittee shall monitor, record, and report particulate matter emissions in accordance with condition 72.

4.5 For Source ID(s) 11 through 14 (flares) the permittee must annually certify compliance with the particulate matter standard.

[18 AAC 50.055(b)(1) & 50.350(g) – (i), 1/18/97; & 18 AAC 50.346(c), 5/3/02]

5. Sulfur Compound Emissions. In accordance with 18 AAC 50.055(c), the permittee shall not cause or allow sulfur compound emissions, expressed as SO_2, from Source ID(s) 1 through 27 to exceed 500 ppm averaged over three hours.

[18 AAC 50.055(c), 1/18/97; 18 AAC 50.350(d)(1)(C); 6/21/98 & 18 AAC 50.346(c), 5/3/02]

5.1 **For Diesel fuel – North Slope:** For liquid fuel from a North Slope topping plant, the permittee shall obtain from the topping plant the results of a monthly fuel sulfur analysis.

a. The permittee shall include in the report required by condition 60 a list of the sulfur content measured for each month covered by the report.

b. The permittee shall report under condition 58 if the sulfur content for any month exceeds 0.75%.

[18 AAC 50.350(g) - (i), 1/18/97 & 18 AAC 50.346(c), 5/3/02]

5.2 **For fuel gas:**

a. Monitoring conducted as required by condition 25.1 satisfies the monitoring requirements necessary to assure compliance with this condition.

b. Recordkeeping – Keep records of analyses conducted in accordance with condition 25.1.

c. Report as excess emissions, in accordance with condition 58, whenever the fuel combusted causes sulfur compound emissions to exceed the standard of condition 5.

d. Include copies of the records required by condition 5.2b with the facility operating report required by condition 60.

[18 AAC 50.350(g) - (i), 1/18/97]

BACT Emission Limits

6. The permittee shall limit actual emissions from the turbines (Source ID(s) 1 through 5) as indicated in

Table 2 below.

[Federal Kuparuk River Unit PSD Permit No. PSD-X82-01, as amended 10/7/1997]
[Construction Permit No. 171CP01, 12/2/2002]

6.1 The permittee shall calculate the monthly and the twelve-month consecutive summation of emissions of NO_X, SO_2, CO, PM, and VOC for Source ID(s) 1 through 5. Use the emission factors found in Section 16 of this permit, along with the hours of operation and/or amount of fuel used, to calculate the monthly emissions for each unit.

6.2 Report the monthly and the consecutive twelve-month period summation of emissions, for each month of the reporting period, with each facility operating report required by condition 60.

6.3 Notify the department per condition 58 should the twelve-month consecutive summation of emissions of any air contaminant exceed the limit for that contaminant in condition 6.

6.4 Monitor, record, and report in accordance with condition 24 to demonstrate compliance with the short-term BACT NO_X emission limit in

Table 2.

[18 AAC 50.350(g) – (i), 1/18/97]

Table 2 - Turbine BACT Emissions Limits (GE Frame 3 and Ruston TB 5000 Units)

Pollutant	Equipment	Emission Limit (short-term) per Individual Turbine	Annual Emission Limit for Source ID(s) 1 through 5 combined (tpy)
NO_X	GE Frame 3 (Source IDs 1 & 2)	150 ppmv @ 15% O_2	1,198
	Ruston/TB5000 (Source IDs 3 through 5)	117 ppmv @ 15% O_2	
SO_2	GE Frame 3 and Ruston/TB5000 units	No Limit	65
CO	GE Frame 3 and Ruston/TB5000 units	0.17 lb/MMBtu	362
PM	GE Frame 3 and Ruston/TB5000 units	No Limit	30
Opacity	GE Frame 3 and Ruston/TB5000 units	10%, consecutive 6-minute average	No Limit
VOC	GE Frame 3 and Ruston/TB5000 units	No Limit	4.5

Notes: 1) All emission limitations are annual average unless otherwise noted.
2) All turbine group emission limits for NO_X refer to full load, ISO conditions.
3) All other emission limits refer to full load, standard conditions.

7. The permittee shall limit actual emissions from the GE Frame 5 turbine (Source ID 6) as indicated in Table 3 below.

[Construction Permit No. 171CP01, 12/2/2002]

7.1 The permittee shall calculate the monthly and the twelve-month consecutive summation of emissions of NO_X, SO_2, CO, PM, and VOC for Source ID 6. Use the emission factors found in Section 16 of this permit, along with the hours of operation and/or amount of fuel used, to calculate the monthly emissions for this unit.

7.2 Report the monthly and the consecutive twelve-month period summation of emissions, for each month of the reporting period, with each facility operating report required by condition 60.

7.3 Notify the department per condition 58 should the twelve-month consecutive summation of emissions of any air contaminant exceed the limit for that contaminant in condition 7.

7.4 Monitor, record, and report in accordance with condition 24 to demonstrate compliance with the short-term BACT NO_X emission limit in Table 3.

[18 AAC 50.350(g) – (i), 1/18/97]

Table 3 - Turbine BACT Emissions Limits (GE Frame 5 Unit)

Pollutant	Emission Limit (short-term) Source ID 6	Annual Emission Limit Source ID 6 (tpy)
NO_X	147 ppmv @ 15% O_2	970
SO_2	No Limit	51
CO	0.17 lb/MMBtu	278
PM	No Limit	23
Opacity	10%, consecutive 6-minute average	No Limit
VOC	No Limit	3.3

Notes: 1) All emission limitations are annual average unless otherwise noted.
2) All turbine group emission limits for NO_X refer to full load, ISO conditions.
3) All other emission limits refer to full load, standard conditions.

8. The permittee shall limit actual emissions from the drill site heaters (Source ID(s) 15 through 27) as indicated in Table 4 below.

[Federal Kuparuk River Unit PSD Permit No. PSD-X82-01, as amended 10/7/1997]
[Construction Permit No. 171CP01, 12/2/2002]

8.1 The permittee shall calculate the monthly and the twelve-month consecutive summation of emissions for NO_X, SO_2, CO and PM for Source ID(s) 15 through 27. Use the emission factors found in Section 16 of this permit, along with the hours of operation and/or amount of fuel used, to calculate the monthly emissions for each unit.

8.2 Report the monthly and the consecutive twelve-month period summation of emissions, for each month of the reporting period, with each facility operating report required by condition 60.

8.3 Notify the department per condition 58 should the twelve-month consecutive summation of emissions of any air contaminant exceed the limit for that contaminant in condition 8.

[18 AAC 50.350(g) – (i), 1/18/97]

Table 4 – Drill Site Heater BACT Emission Limits

Pollutant	Emission Limit (short-term) per Individual Heater	Annual Emission Limit for Source ID(s) 15 through 27 combined (tpy)
NO_X	0.10 lb/MMBtu	124
SO_2	No Limit	34
CO	0.035 lb/MMBtu	43
PM	No Limit	14
Opacity	10%, consecutive 6-minute average	No Limit
VOC	No Limit	No Limit

Notes: 1) All emission limitations are annual average unless otherwise noted.
2) All emission limits refer to full load, standard conditions.

9. The permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from Source ID(s) 1 through 6 and 15 through 27 to reduce visibility through the exhaust effluent by greater than 10 percent averaged over any six consecutive minutes.

[Federal Kuparuk River Unit PSD Permit No. PSD-X82-01, as amended 10/7/1997]
[Construction Permit No. 171CP01, 12/2/2002]

9.1 For Source ID(s) 1 through 6 and 15 through 27 burn only gas as fuel. Monitoring for these sources shall consist of an annual certification that each of these sources fired only gas.

[18 AAC 50.350(g) – (i), 1/18/97]

NO_X Emission Limit for the Howe-Baker Heater (Source ID 8)

10. The permittee shall limit the oxides of nitrogen emissions from the Howe-Baker heater (Source ID 8) to 0.1 lb/MMBtu.

[Construction Permit No. 171CP01, 12/2/2002]

10.1 The permittee shall maintain records that are available for inspection which demonstrate that the heater burners are maintained in good operating condition and in accordance with current Phillips established guidelines and operating procedures.

[18 AAC 50.350 (g) – (i), 1/18/97]

Fuel Consumption Monitoring

11. The permittee shall maintain and operate fuel gas meters or provide other means of estimating fuel consumption to determine the total volume of fuel gas consumed by the Turbines (Source ID(s) 1 through 6), the Broach and Howe-Baker heaters (Source ID(s) 7 and 8), the Flares (Source ID(s) 11 through 14), and the Drill Site heaters (Source ID(s) 15 through 27). For emergency equipment (Source ID(s) 9 and 10) the fuel consumption may be estimated.

[Operating Permit No. 9373-AA006, 5/11/93]

11.1 Monitor and record the monthly fuel consumption for each group (Turbines, Broach and Howe-Baker heaters, Flares, and the Drill Site heaters) of Source ID(s) 1 through 27.

11.2 Report using the facility operating report under condition 60, the monthly fuel consumption (MMscf/month or gallons/month) for each group (Turbines, Broach and Howe-Baker heaters, Flares, and the Drill Site heaters) of Source ID(s) 1 through 27, and the facility total fuel consumption, for each month of the reporting period.

[18 AAC 50.350(g) – (i), 1/18/97]

NO_X Emissions Increase from GE Frame 5 ATP Upgrade (Source ID 6)

12. The permittee shall limit the increase in emissions of oxides of nitrogen from the GE Frame 5 turbine to 35 tons per year when using the N-liners.

12.1 The permittee will notify the department within 7 days if N-liners are installed.

12.2 Monitor, record, and report NO_X emissions according to condition 7.

[Operating Permit No. 9373-AA006, 5/11/93]

Fuel Gas Sulfur Content Limit

13. The permittee shall not use fuel gas with a hydrogen sulfide (H_2S) concentration that exceeds 200 ppm at standard conditions, annual average.

13.1 Monitor and record according to conditions 25.1and 25.3.

13.2 Report the consecutive twelve-month period average fuel gas H_2S concentration, for each month of the reporting period, with each facility operating report required by condition 60.

13.3 Notify the department per condition 58 should the twelve-month period average fuel gas H_2S concentration exceed the limit in condition 13.

[Operating Permit No. 9373-AA006, 5/11/93]
[18 AAC 50.350(g) – (i), 1/18/97]

Operating Hours for Emergency Equipment (Source ID(s) 7, 9 & 10)

14. The permittee shall operate the emergency equipment (Source ID(s) 9 and 10) for no more than 200 hours each per consecutive twelve-month period. This limit does not include emergency operations.

[Construction Permit No. 171CP01, 12/2/2002]
[18 AAC 50.335(g), 1/18/97]

14.1 Monitor and record the monthly hours of operation and the consecutive twelve-month period summation for each of Source(s) 9 and 10.

14.2 Report the monthly and consecutive twelve-month total of hours (both for emergency and non-emergency modes) operated each month of the reporting period with the facility operating report required by condition 60.

14.3 Report under condition 58 if the consecutive twelve-month total hours of non-emergency operation for any given month exceed the limit in condition 14.

[18 AAC 50.350 (g) – (i), 1/18/97]

15. The permittee shall operate Source ID 7 for no more than 2 hours per day on liquid fuel and six hours per day on gaseous fuel if liquid fuel is fired on that day. (There is no limit on gas firing during a day when liquid fuel is not burned. This limit does not include emergency operations.)

15.1 Monitor and record the daily hours of operation (emergency and non-emergency) of Source ID 7.

15.2 Report the maximum daily total hours of liquid and gas fuel operation for Source ID 7 each month of the reporting period with the facility operating report required by condition 60.

15.3 Report under condition 58 if the maximum daily total hours of non-emergency operation of source ID 7 for any given month exceeds the limit in condition 15.

[18AAC50.335(g), 1/18/97]

Sources Subject to Federal New Source Performance Standards (NSPS), Subpart A

16. NSPS Subpart A Startup, Shutdown, & Malfunction Requirements. The permittee shall maintain records of the occurrence and duration of any start-up, shutdown, or malfunction in the operation of Source ID(s) 1 through 6, 13, 27, and 42; any malfunctions of associated air pollution control equipment, or any periods during which a continuous monitoring system or monitoring device is inoperative.

[18 AAC 50.040(a)(1), 7/2/00]
[40 C.F.R. 60.7(b), Subpart A, 7/1/99]

17. NSPS Subpart A Performance Test. Within 60 days after achieving maximum production rate, but not later than 180 days after initial startup, the permittee shall conduct a NO_X performance test on Source ID 1 in accordance with 40 CFR 60.8 and 40 CFR 60.335(b) and (c).

[18 AAC 50.040(a)(1) & 50.040(a)(2)(V), 7/2/00]
[40 C.F.R. 60.8, Subpart A, 7/1/99]
[40 C.F.R. 335(b) & (c), Subpart GG, 7/1/99]

18. NSPS Subpart A Good Air Pollution Control Practice. At all times, including periods of startup, shutdown, and malfunction, the permittee shall, to the extent practicable, maintain and operate Source ID(s) 1 through 6, 13, 27, and 42 including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspections of the affected sources.

[18 AAC 50.040(a)(1), 7/2/00]
[40 C.F.R. 60.11(d), Subpart A, 7/1/99]

19. NSPS Subpart A Concealment of Emissions. The permittee shall not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of a standard set forth in condition(s) 22, 23 and 25. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard that is based on the concentration of a pollutant in the gases discharged to the atmosphere.

[18 AAC 50.040(a)(1), 7/2/00]
[40 C.F.R. 60.12, Subpart A, 7/1/99]

20. NSPS Subpart A Credible Evidence. For the purpose of submitting compliance certifications or establishing whether or not the permittee has violated or is in violation of the standards set forth in conditions 22, 23, 25, and 26, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether Source IDs 1 through 6, 13, 27 and 42 would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed.

[18 AAC 50.040(a)(1), 7/2/00]
[40 C.F.R. 60.11(g), Subpart A, 7/1/99]

Volatile Organic Liquid Storage Vessels (Tanks) Subject to NSPS Subpart Kb

21. NSPS Subpart Kb Requirements (Recordkeeping Only). For Source ID(s) 28 through 41, the permittee shall keep readily accessible records for the life of the tank showing the dimensions and an analysis showing the capacity of the tank.

[18 AAC 50.040(a)(2)(M), 7/2/00]
[40 C.F.R. 60.110b(c) & 116b(a) & (b), Subpart Kb, 7/1/99]

22. NSPS Subpart Kb VOC Standard. The permittee shall equip Source ID 42 with a closed vent system and control device. The closed vent system shall be designed to collect all VOC vapors and gases discharged from each storage vessel and operated with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background as determined by Method 21. The control device shall be designed and operated to reduce inlet VOC emissions by 95 percent or greater.

[18 AAC 50.040(a)(2)(M), 6/21/98; & 40 C.F.R. 60.112b(a)(3), Subpart Kb, 7/1/99]

22.1 The control device (flare, ID 13) shall be operated in accordance with 40 C.F.R. 60.18(c)(1), (c)(2), (c)(3), (c)(5), (c)(6), 60.18(d), 60.18(e), 60.18(f)(1), (f)(2), (f)(3), (f)(4), and (f)(6).

[40 C.F.R. 60.18(c), (d), (e), (f), Subpart A, 7/1/99]

22.2 Maintain records of all periods of operation during which the flare pilot flame is absent.

[18 AAC 50.040(a)(1) & (a)(2)(M) and 18 AAC 50.350(g)-(i), 6/21/98]
[40 C.F.R. 60.115b(d)(2), Subpart Kb, 7/1/99]

22.3 Semiannual reports of all periods recorded under condition 20.2 in which the pilot flame was absent shall be furnished to the Administrator.

[18 AAC 50.040(a)(1) & (a)(2)(M) and 18 AAC 50.350(g)-(i), 6/21/98]
[40 C.F.R. 60.115b(d)(3), Subpart Kb, 7/1/99]

22.4 Keep readily accessible records for the life of the tank showing the dimensions and an analysis showing the capacity of the storage vessel.

[40 C.F.R 60.116b(b), Subpart Kb, 7/1/99]

22.5 Submit a Compliance Assurance Monitoring (CAM) Plan by the time specified in 40 CFR 64.5(a)(2) or (a)(3), whichever comes first.

[40 C.F.R 64.5(a), 10/22/97]

Turbines Subject to NSPS Subpart GG (Source ID(s) 1 through 6)

23. NSPS Subpart GG NO_X Standard. The permittee shall not allow the corrected exhaust gas concentration of NO_X from:

23.1 Source ID(s) 1 and 2 to exceed 175 ppmv.

23.2 Source ID(s) 3, 4 and 5 to exceed 153 ppmv.

23.3 Source ID 6 to exceed 170 ppmv.

[18 AAC 50.040(a)(2)(V), 7/2/00]
[40 C.F.R. 60.332(a)(2), Subpart GG, 7/1/99]

24. NO_X Monitoring, Recordkeeping, and Reporting for GG Turbines.

24.1 **Waivers**. The permittee shall provide to the department a written copy of any U.S. EPA granted waiver of the federal emission standards, record keeping, monitoring, performance testing, or reporting requirements, or approved custom monitoring schedules upon request by the department. The permittee shall keep a copy of each U.S. EPA issued monitoring waiver or custom monitoring schedule on file.

24.2 **Periodic Testing**.

a. **Initial Periodic Testing.** For each turbine subject to condition 23 that operates for 400 hours or more in any 12-month period during the life of this permit, the permittee shall satisfy either condition 24.2a(i) or 24.2a(ii).

(i) For existing turbines not represented by emission data described in condition 24.2a(ii), the permittee shall conduct a NO_X and O_2 source test under 40 C.F.R. 60, Appendix A-7, Method 20 within three years after issuance of this permit

(A) for each turbine, or

(B) on one turbine to represent a group of turbines, if allowed to do so under condition 24.3.

(ii) If a test following 40 C.F.R. 60, Appendix A-7, Method 20 or following another protocol approved by the department has been conducted on a turbine within two years before the issuance date of this permit, and the test shows that emissions at maximum load are less than 90 percent of the emission limit in condition 23, then

(A) the permittee may use those test results to represent emissions from that turbine or for a group of turbines if allowed under condition 24.3 until the testing of condition 24.2a(ii)(B) is performed; and

(B) the permittee shall conduct a Method 20 test on each turbine, or on one of a group of turbines as allowed under condition 24.3, within the 5 years of the permit term.

b. **Higher Tier Testing.** For each turbine with test results under condition 24.2a that are 90 percent or more of the emission limit of condition 23, or for which emissions will equal or exceed 90% of the emission limit at maximum load, as shown through condition 24.4, the permittee shall conduct an additional Method 20 test for the turbine within one year of the test under condition 24.2a. The permittee shall conduct at least one additional test per year until at least two consecutive tests show that emissions for the turbine are less than 90 percent of the limit at loads up to maximum load.

24.3 **Substituting Test Data.** The permittee may use a Method 20 test under conditions 24.2a or 24.2b performed on only one of a group of turbines to satisfy the requirements of those conditions for the other turbines in the group if

a. the permittee demonstrates that test results are less than 90% of the emission limit of condition 23, and are projected under condition 24.4 to be less than 90% of the limit at maximum load;

b. for any source test done after the issuance date of this permit, the permittee identifies in a source test plan under condition 50

(i) the turbine to be tested;

(ii) the other turbines in the group that are to be represented by the test; and

(iii) why the turbine to be tested is representative, including that each turbine in the group

(A) is located at a facility operated and maintained by the permittee;

(B) is the same make and model and has identical injectors and combustor; and

(C) uses the same fuel type;

c. for any source test done before the issuance date of this permit and used under condition 24.2a(ii), the permittee

(i) demonstrates why the test results are representative of emissions from the entire group of turbines, including that each turbine in the group

(A) is located at a facility operated and maintained by the permittee;

(B) is the same make and model and has identical injectors and combustor and;

(C) uses the same fuel type;

(ii) submits all results of source testing that has been performed on each turbine in the group, regardless of the date of the test, and certifies that the submittal is complete, consistent with 18 AAC 50.205.

24.4 **Load.**

a. The permittee shall conduct all tests under condition 24.2 in accordance with 40 C.F.R. 60.335(c)(3), except as otherwise approved in writing by the department, or by EPA if the circumstances at the time of the EPA approval are still valid. For the highest load condition, if it is not possible to operate the turbine during the test at maximum load, the permittee will test the turbine when operating at the highest load achievable by the turbine under the ambient and facility operating conditions in effect at the time of the test.

b. The permittee shall demonstrate in the source test plan for any test performed after the issue date of this permit whether the test is scheduled when maximum NO_X emissions are expected.

c. If the highest operating rate tested is less than the maximum load of the tested turbine or another turbine represented by the test data,

(i) for each such turbine the permittee shall provide to the department as an attachment to the source test report

(A) additional test information from the manufacturer or from previous testing of units in the group of turbines; if using previous testing of the group of turbines, the information must include all available test data for the turbines in the group, and

(B) a demonstration based on the additional test information that projects the test results from condition 24.2 to predict the highest load at which emissions will comply with the limit in condition 23;

(ii) the permittee shall not operate any turbine represented by the test data at loads for which the permittee's demonstration predicts that emissions will exceed the limit of condition 23;

(iii) the permittee shall comply with a written finding prepared by the department that

(A) the information is inadequate for the department to reasonably conclude that compliance is assured at any load greater than the test load, and that the permittee must not exceed the test load;

(B) the highest load at which the information is adequate for the department to reasonably conclude that compliance assured is less than maximum load, and the permittee must not exceed the highest load at which compliance is predicted, or

(C) the permittee must retest during a period of greater expected demand on the turbine;

(iv) the permittee may revise a load limit by submitting results of a more recent Method 20 test done at a higher load, and, if necessary, the accompanying information and demonstration described in condition 24.4c(i); the new limit is subject to any new department finding under condition 24.4c(iii).

d. In order to perform a Method 20 emission test, the permittee may operate a turbine at a higher load than that prescribed by condition 24.4c.

e. For the purposes of conditions 24.1 through 24.6, maximum load means the hourly average load that is the smallest of

(i) 100 percent of manufacturer's design capacity of the gas turbine at ISO standard day conditions;

(ii) the highest load allowed by an enforceable condition that applies to the turbine; or

(iii) the highest load possible considering permanent physical restraints on the turbine or the equipment which it powers.

24.5 **Recordkeeping**.

a. The permittee shall comply with the following for each turbine for which a demonstration under condition 24.4c does not show compliance with the limit of condition 23 at maximum load.

(i) The permittee shall keep records of

(A) load; or

(B) as approved by the department, surrogate measurements for load and the method for calculating load from those measurements.

(ii) Records in condition 24.5a shall be hourly or otherwise as approved by the department.

(iii) Within one month after submitting a demonstration under condition 24.4c(i)(B) that predicts that the highest load at which emissions will comply is less than maximum load, or within one month of a department finding under condition 24.4c(iii), whichever is earlier, the permittee shall propose to the department how they will measure load or load surrogates, and shall propose and comply with a schedule for installing any necessary equipment and beginning monitoring. The permittee shall comply with the approved load monitoring methods, equipment, or schedule.

b. For any turbine subject to condition 23, that will operate less than 400 hours in any 12 consecutive months, keep monthly records of the hours of operation. If a turbine that normally operates less than 400 hours exceeds that total during any 12 month period,

(i) test according to condition 24.2; or

(ii) if it is no longer possible to meet that schedule, test within one year of exceeding 400 hours in 12 consecutive months.

24.6 **Reporting**.

a. In each facility operating report under condition 60 the permittee shall list for each turbine tested or represented by testing at less than maximum load and for which the permittee must limit load under condition 24.4c

(i) the load limit;

(ii) the turbine identification; and

(iii) the highest load recorded under condition 24.5a during the period covered by the operating report.

b. In each facility operating report under condition 60 for each turbine for which condition 24.2 has not been satisfied because the turbine normally operates less than 400 hours in any 12 months, the permittee shall identify

(i) the turbine;

(ii) the highest number of operating hours for any 12 months ending during the period covered by the report; and

(iii) any turbine that operated for 400 or more hours.

c. The permittee shall report under condition 58 if

(i) a test result exceeds the emission standard;

(ii) Method 20 testing is required under condition 24.2 or 24.5b but not performed, or

(iii) the turbine was operated at a load exceeding that allowed by conditions 24.4c(ii) and 24.4c(iii); exceeding a load limit is deemed a single violation rather than a multiple violation of both monitoring and the underlying emission limit.

[18 AAC 50.350(g)-(i) & 220(a)-(c), 5/3/02]
[18 AAC 50.040(a)(1), 7/2/00]
[40 CFR 60.8(b), 7/1/99]

25. NSPS Subpart GG Sulfur Standard. The permittee shall not allow the sulfur content of the fuel burned in Source ID(s) 1 through 6 to exceed 0.8 percent by weight.

[18 AAC 50.040(a)(2)(V), 7/2/00]
[40 C.F.R. 60.333, Subpart GG, 7/1/99]

25.1 Monitor compliance monthly with the fuel sulfur content standard when burning gaseous fuels using ASTM D4810-88, D4913-89, or Gas Producers Association 2377-86, or an alternative analytical method approved by EPA.

[18 AAC 50.040(a)(2)(V), 7/2/00]
[40 C.F.R. 60.334 & 60.335, Subpart GG, 7/1/99]

25.2 The fuel sulfur analysis required under this condition may be performed by the owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency.

[40 C.F.R. 60.335(e), 7/1/99]

25.3 Keep records of analysis required by condition 25.1.

25.4 Submit a summary of the analytical results with the facility operating report required by condition 60.

25.5 The permittee shall annually report to the EPA results of all sulfur monitoring required by this condition.

[40 C.F.R. 60.334(c)(2), 7/1/99]

Boilers Subject to NSPS Subpart Dc (Source ID 27)

26. The permittee shall record and maintain records of the amount of fuel gas combusted during each day for Source ID 27.

[18 AAC 50.040(a)(2)(D), 7/2/00]
[40 C.F.R. 60.48c(g), Subpart Dc, 2/12/99]

Section 6. Facility-Wide Requirements

NESHAPs Subpart A Requirement

27. NESHAPs Applicability Determinations. The permittee shall determine rule applicability and designation of affected sources under National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Source Categories (40 CFR 63) in accordance with the procedures described in 40 CFR 63.1(b). If a source becomes affected by an applicable subpart of 40 CFR 63, permittee shall achieve compliance with applicable provisions as expeditiously as practical after publication of final rule, but not later than three years after promulgation of a final rule.

27.1 A record of any applicability determination shall be retained on site for a period of 5 years after the determination, or until a source changes its operations to become an affected source, whichever comes first. The record of the applicability determination shall include an analysis (or other information) that demonstrates why the permittee believes the source is unaffected. The analysis shall be sufficiently detailed to allow the Administrator to make a finding about the source's applicability status with regard to the relevant standard or other requirement.

[40 C.F.R. 63.1(b) & 63.10(b), 03/16/94]
[18 AAC 50.350(h), 1/18/97; 18 AAC 50.040(c)(1)(A) & 50.040(c)(1)(E), 7/1/99]

Halon Prohibitions

28. Halon Emissions Reduction. The permittee shall comply with the following prohibitions set out in 40 CFR 82.270(b) - (f) (Protection of Stratospheric Ozone Subpart H - Halon Emissions Reduction). Monitoring shall consist of an annual certification that the permittee complies with these prohibitions.

28.1 No person testing, maintaining, servicing, repairing, or disposing of halon-containing equipment or using such equipment for technician training may knowingly vent or otherwise release into the environment any halons used in such equipment, subject to the exemptions set out in §82.270(b)(1) - (6).

[18 AAC 50.040(d) & 18 AAC 50.350(d)(1), 1/18/97]
[40 C.F.R. 82.270(b)]

28.2 Organizations that employ technicians who test, maintain, service, repair or dispose of halon-containing equipment shall ensure that technicians hired on or before April 6, 1998 shall be trained by September 1, 1998. Technicians hired after April 6, 1998 shall be trained within 30 days of hiring, or by September 1, 1998, whichever is later.

[18 AAC 50.040(d) & 18 AAC 50.350(d)(1), 1/18/97]
[40 C.F.R. 82.270(c)]

28.3 No person shall dispose of halon-containing equipment except in accordance with §82.270(d).

[18 AAC 50.040(d) & 18 AAC 50.350(d)(1), 1/18/97]
[40 C.F.R. 82.270(d)]

28.4 No person shall dispose of halon except in accordance with §82.270(e).

[18 AAC 50.040(d) & 18 AAC 50.350(d)(1), 1/18/97]
[40 C.F.R. 82.270(e)]

28.5 No owner of halon-containing equipment shall allow halon release to occur as a result of failure to maintain such equipment.

[18 AAC 50.040(d) & 18 AAC 50.350(d)(1), 1/18/97]
[40 C.F.R. 82.270(f)]

29. Significant New Alternatives Policy Programs. The permittee shall comply with the following prohibitions set out in 40 CFR 82.174(b) - (d) (Protection of Stratospheric Ozone Subpart G - Significant New Alternatives Policy Program). Monitoring shall consist of an annual certification that the permittee complies with these prohibitions.

29.1 No person may use a substitute which a person knows or has reason to know was manufactured, processed, or imported in violation of the regulations of 40 CFR 82 Subpart G, or knows or has reason to know was manufactured, processed or imported in violation of any use restriction in the acceptability determination, after the effective date of any rulemaking imposing such restrictions.

[18 AAC 50.040(d) & 18 AAC 50.350(d)(1), 1/18/97]
[40 C.F.R. 82.174(b)]

29.2 No person may use a substitute without adhering to any use restrictions set by the acceptability decision, after the effective date of any rulemaking imposing such restrictions.

[18 AAC 50.040(d) & 18 AAC 50.350(d)(1), 1/18/97]
[40 C.F.R. 82.174(c)]

29.3 No person may use a substitute after the effective date of any rulemaking adding such substitute to the list of unacceptable substitutes.

[18 AAC 50.040(d) & 18 AAC 50.350(d)(1), 1/18/97]
[40 C.F.R. 82.174(d)]

Section 7. Insignificant Sources

This section contains the requirements that the permittee identified under 18 AAC 50.335(q)(2) as applicable to insignificant sources at the facility. This section also specifies the testing, monitoring, recordkeeping, and reporting for insignificant sources that the department finds necessary to ensure compliance with the applicable requirements. Insignificant sources are not exempted from any air quality control requirement or federally enforceable requirement.

As set out in 18 AAC 50.350(m), the shield of AS 46.14.290 does not apply to insignificant sources.

30. For sources at the facility that are insignificant as defined in 18 AAC 50.335(q)-(v) that are not listed in this permit, the following apply:

30.1 the permittee shall submit the compliance certifications of condition 54 based on reasonable inquiry;

30.2 the permittee shall comply with the requirements of condition 41;

30.3 the permittee shall report in the operating report required by condition 60 if a source listed in this condition 30 because of actual emissions less than the thresholds of 18 AAC 50.335(r) has actual emissions greater than any of those thresholds;

30.4 no other monitoring, record keeping, or reporting is required.

[18 AAC 50.346(b)(1), 5/3/02]

31. The permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from an industrial process, fuel-burning equipment, or an incinerator to reduce visibility through the exhaust effluent by either

31.1 more than 20% for more than three minutes in any one hour[3], or

[18 AAC 50.055(a)(1), 1/18/97, 40 CFR 52.70, 11/18/98]

31.2 more than 20% averaged over any six consecutive minutes[4].

[18 AAC 50.055(a)(1), 5/3/02]

32. The permittee shall not cause or allow particulate matter emitted from an industrial process or fuel-burning equipment to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

[18 AAC 50.055(b)(1), 1/18/97]

33. The permittee shall not cause or allow sulfur compound emissions, expressed as SO_2, from an industrial process or fuel-burning equipment, to exceed 500 ppm averaged over three hours.

[18 AAC 50.055(c), 1/18/97]

[3] See footnote 1.
[4] See footnote 2.

Section 8. Generally Applicable Requirements

34. Asbestos NESHAP. The permittee shall comply with the requirements set forth in 40 C.F.R. 61.145 and 61.150, and the applicable sections set forth in 40 C.F.R. 61, Subpart A and Appendix A.

[18 AAC 50.040(b)(3) & 50.350(d)(1), 1/18/97]
[40 C.F.R. 61, Subparts A & M, 12/19/96]

35. Refrigerant Recycling and Disposal (Protection of Stratospheric Ozone). The permittee shall comply with the applicable standards for recycling and emission reduction of substances regulated by 40 CFR 82.154, §82.156, §82.161, §82.162, and §82.166.

[18 AAC 50.040(d) & 18 AAC 50.350(d)(1), 1/18/97]
[40 C.F.R. 82, Subpart F, 7/1/97]

36. Good Air Pollution Control Practice.

36.1 The permittee shall do the following for Source ID(s) 7 through 12, 14 through 26, and 28 through 41:

a. perform regular maintenance considering the manufacturer's or the operator's maintenance procedures;

b. keep records of any maintenance that would have a significant effect on emissions; the records may be kept in electronic format;

c. keep a copy of either the manufacturer's or the operator's maintenance procedures.

[18 AAC 50.346(b)(2), 5/3/02]

37. Open Burning. The permittee shall conduct any open burning at the facility in accordance with the requirements of 18 AAC 50.065.

[18 AAC 50.040(e), 7/21/01, 18 AAC 50.065, 7/21/01, 18 AAC 50.350(d)(1), 1/18/97]

38. Reasonable Precautions to Prevent Particulate Matter from Becoming Airborne. The permittee shall take reasonable precautions to prevent particulate matter from being emitted into the ambient air when causing or permitting bulk materials to be handled, transported, or stored, or when engaging in an industrial activity or construction project. Monitoring shall consist of an annual certification that reasonable precautions were taken.

[18 AAC 50.045(d), 1/18/97]

39. Dilution. The permittee shall not dilute emissions with air to comply with this permit. Monitoring shall consist of an annual certification that the permittee does not dilute emissions to comply with this permit.

[18 AAC 50.045(a), 1/18/97]

40. Stack Injection. The permittee shall not release materials other than process emissions, products of combustion, or materials introduced to control pollutant emissions from a stack at a source constructed or modified after November 1, 1982, unless approved in writing by the department. Monitoring shall consist of an annual certification that the permittee does not conduct stack injection at the facility.

[18 AAC 50.055(g), 1/18/97]

41. Air Pollution Prohibited. No person may permit any emission which is injurious to human health or welfare, animal or plant life, or property, or which would unreasonably interfere with the enjoyment of life or property.

[18 AAC 50.110, 5/26/72]

41.1 If emissions present a potential threat to human health or safety, the permittee shall report any such emissions according to condition 58.

41.2 As soon as practicable after becoming aware of a complaint that is attributable to emissions from the facility, the permittee shall investigate the complaint to identify emissions that the permittee believes have caused or are causing a violation of condition 41.

41.3 The permittee shall initiate and complete corrective action necessary to eliminate any violation identified by a complaint or investigation as soon as practicable if

a. after an investigation because of a complaint or other reason, the permittee believes that emissions from the facility have caused or are causing a violation of condition 41; or

b. the department notifies the permittee that it has found a violation of condition 41

41.4 The permittee shall keep records of

a. the date, time, and nature of all emissions complaints received;

b. the name of the person or persons that complained, if known;

c. a summary of any investigation, including reasons the permittee does or does not believe the emissions have caused a violation of condition 41; and

d. any corrective actions taken or planned for complaints attributable to emissions from the facility.

41.5 With each facility operating report under condition 60, the permittee shall include a brief summary report which must include

a. the number of complaints received;

b. the number of times the permittee or the department found corrective action necessary;

c. the number of times action was taken on a complaint within 24 hours; and

d. the status of corrective actions the permittee or department found necessary that were not taken within 24 hours.

41.6 The permittee shall notify the department of a complaint that is attributable to emissions from the facility within 24 hours after receiving the complaint, unless the permittee has initiated corrective action within 24 hours of receiving the complaint.

[18 AAC 50.346(a)(2), 5/3/02]
[18 AAC 50.350(h) – (i), 1/18/97]

42. Technology-Based Emission Standard. If an unavoidable emergency, malfunction, or non-routine repair, as defined in 18 AAC 50.235, causes emissions in excess of a technology-based emission standard[5], the permittee shall take all reasonable steps to minimize levels of emissions that exceed the standard and shall give written notice to the department within two working days after the event commenced or was discovered. Notice to the department must include the information stated in 18 AAC 50.235(a)(2).

[18 AAC 50.235(a) & 50.350(f)(3), 1/18/97]

43. Permit Renewal. To renew this permit, the permittee shall submit an application under 18 AAC 50.335 no sooner than July 3, 2006 and no later than July 2, 2007 to renew this permit**.**

[18 AAC 50.335(a), 1/18/97]

[5] *Technology-based emission standard* means a best available control technology standard (BACT); a lowest achievable emission rate standard (LAER); a maximum achievable control technology standard established 40 C.F.R. 63, Subpart B, adopted by reference in 18 AAC 50.040(c); a standard adopted by reference in 18 AAC 50.040(a) or (c); and any other similar standard for which the stringency of the standard is based on determinations of what is technologically feasible, considering relevant factors.

Section 9. General Source Testing and Monitoring Requirements

44. Requested Source Tests. In addition to any source testing explicitly required by the permit, the permittee shall conduct source testing as requested by the department to determine compliance with applicable permit requirements.

[18 AAC 50.345(k), 5/3/02]

45. Operating Conditions. Unless otherwise specified by an applicable requirement or test method, the permittee shall conduct source testing

[18 AAC 50.220(b) & 50.350(g), 1/18/97]

45.1 at a point or points that characterize the actual discharge into the ambient air; and

45.2 at the maximum rated burning or operating capacity of the source or another rate determined by the department to characterize the actual discharge into the ambient air.

46. Reference Test Methods. The permittee shall use the following as reference test methods when conducting source testing for compliance with this permit:

46.1 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(a) must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 60.

[18 AAC 50.040(a), 7/2/00]
[18 AAC 50.220(c)(1)(A) & 50.350(g), 1/18/97]
[40 C.F.R. 60, 7/1/99]

46.2 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(b) must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 61.

[18 AAC 50.040(b), 50.220(c)(1)(B) & 50.350(g), 1/18/97]
[40 C.F.R. 61, 12/19/96]

46.3 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(c) must be conducted in accordance with the source test methods and procedures specified in 40 C.F.R. 63.

[18 AAC 50.040(c), 7/2/00]
[18 AAC 50.220(c)(1)(C) & 50.350(g), 1/18/97]
[40 C.F.R. 63, 7/1/99]

46.4 Source testing for reduction in visibility through the exhaust effluent must be conducted in accordance with the procedures set out in Reference Method 9.

[18 AAC 50.030, 12/30/00]
[18 AAC 50.220(c)(1)(D) & 50.350(g), 1/18/97]

46.5 Source testing for emissions of particulate matter, sulfur compounds, nitrogen compounds, carbon monoxide, lead, volatile organic compounds, fluorides, sulfuric acid mist, municipal waste combustor organics, metals, and acid gases must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 60, Appendix A.

[18 AAC 50.040(a)(4), 7/2/00]
[18 AAC 50.220(c)(1)(E) & 50.350(g), 1/18/97]
[40 C.F.R. 60, Appendix A, 7/1/99]

46.6 Source testing for emissions of PM-10 must be conducted in accordance with the procedures specified in 40 C.F.R. 51, Appendix M.

[`18 AAC 50.035(b)(2), 7/2/00]
[18 AAC 50.220(c)(1)(F) & 18 AAC 50.350(g), 1/18/97]
[40 C.F.R. 51, Appendix M, 7/1/99]

46.7 Source testing for emissions of any contaminant may be determined using an alternative method approved by the department in accordance with 40 C.F.R. 63 Appendix A, Method 301.

[18 AAC 50.040(c)(19), 7/2/00]
[18 AAC 50.220(c)(2) & 50.350(g), 1/18/97]
[40 C.F.R. 63, Appendix A, Method 301, 7/1/99]

47. Particulate Matter Calculations. In source testing for compliance with the particulate matter standards in conditions 4 and 32, the three-hour average is determined using the average of three one-hour test runs.

48. Excess Air Requirements. To determine compliance with this permit, standard exhaust gas volumes must only include the volume of gases formed from the theoretical combustion of fuel, plus the excess air volume normal for the specific source type, corrected to standard conditions (dry gas at 68° F and an absolute pressure of 760 millimeters of mercury).

[18 AAC 50.220(c)(3), 50.350(g), 1/18/97 & 18 AAC 50.990(88), 5/3/02]

49. Test Deadline Extension. The permittee may request an extension to a source test deadline established by the department. The permittee may delay a source test beyond the original deadline only if the extension is approved in writing by the department's appropriate division director or designee.

[18 AAC 50.345(l), 5/3/02]

50. Test Plans. Except as provided in condition 53, before conducting any source tests, the permittee shall submit a plan to the department. The plan must include the methods and procedures to be used for sampling, testing, and quality assurance and must specify how the source will operate during the test and how the permittee will document that operation. The permittee shall submit a complete plan within 60 days after receiving a request under condition 44 and at least 30 days before the scheduled date of any test unless the department agrees in writing to some other time period. Retesting may be done without resubmitting the plan.

[18 AAC 50.345(m), 5/3/02]

51. Test Notification. Except as provided in condition 53, at least 10 days before conducting a source test, the permittee shall give the department written notice of the date and the time the source test will begin.

[18 AAC 50.345(n), 5/3/02]

52. Test Reports. Except as provided in condition 53, within 60 days after completing a source test, the permittee shall submit two copies of the results in the format set out in the *Source Test Report Outline*, adopted by reference in 18 AAC 50.030. The permittee shall certify the results in the manner set out in condition 54. If requested in writing by the department, the permittee must provide preliminary results in a shorter period of time specified by the department.

[18 AAC 50.345(o), 5/3/02]

53. Test Exemption. The permittee is not required to comply with conditions 50, 51 and 52 (Test Plans, Test Notifications and Test Reports) when the exhaust is observed for visible emissions.

[18 AAC 50.345(a), 5/3/02]

Section 10. General Recordkeeping, Reporting, and Compliance Certification Requirements

54. Certification. The permittee shall certify all reports, compliance certifications, or other documents submitted to the department and required under the permit by including the signature of a responsible official for the permitted facility following the statement: "Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete." Excess emission reports must be certified either upon submittal or with an operating report required for the same reporting period. All other reports and other documents must be certified upon submittal. When certifying a compliance certification, the official's signature must be notarized.

[18 AAC 50.345(j), 5/3/02]

55. Submittals. Unless otherwise directed by the department or this permit, the permittee shall send reports, compliance certifications, and other documents required by this permit to ADEC, Air Permits Program, 610 University Ave., Fairbanks, AK 99709-3643, ATTN: Compliance Technician.

[18 AAC 50.350(i), 1/18/97]

56. Information Requests. The permittee shall furnish to the department, within a reasonable time, any information the department requests in writing to determine whether cause exists to modify, revoke and reissue, or terminate the permit or to determine compliance with the permit. Upon request, the permittee shall furnish to the department copies of records required to be kept by the permit. The department may require the permittee to furnish copies of those records directly to the Federal Administrator.

[18 AAC 50.345(i), 5/3/02]

57. Recordkeeping Requirements. The permittee shall keep all records required by this permit for at least five years after the date of collection, including:

57.1 copies of all reports and certifications submitted pursuant to this section of the permit; and

57.2 records of all monitoring required by this permit, and information about the monitoring including:

a. calibration and maintenance records, original strip chart or computer-based recordings for continuous monitoring instrumentation;

b. sampling dates and times of sampling or measurements;

c. the operating conditions that existed at the time of sampling or measurement;

d. the date analyses were performed;

e. the location where samples were taken;

f. the company or entity that performed the sampling and analyses;

g. the analytical techniques or methods used in the analyses; and

h. the results of the analyses.

[18 AAC 50.350(h), 1/18/97]

58. Excess Emissions and Permit Deviation Reports.

58.1 Except as provided in condition 41, the permittee shall report all emissions or operations that exceed or deviate from the requirements of this permit as follows:

a. in accordance with 18 AAC 50.240(c), as soon as possible after the event commences or is discovered, report

(i) emissions that present a potential threat to human health or safety; and

(ii) excess emissions that the permittee believes to be unavoidable;

b. in accordance with 18 AAC 50.235(a), within two working days after the event commenced or was discovered, report an unavoidable emergency, malfunction, or nonroutine repair that causes emissions in excess of a technology based emission standard;

c. report all other excess emissions and permit deviations

(i) within 30 days of the end of the month in which the emissions or deviation occurs or is discovered, except as provided in conditions 58.1c(ii);

(ii) if a continuous or recurring excess emissions is not corrected within 48 hours of discovery, within 72 hours of discovery unless the department provides written permission to report under condition 58.1c(i).

58.2 When reporting excess emissions, the permittee must report using either the department's online form, which can be found at www.dec.state.ak.us/awq/excess/report.asp, or, if the permittee prefers, the form contained in Section 17 of this permit. The permittee must provide all information called for by the form that is used.

58.3 When reporting a permit deviation, the permittee must report using the form contained in Section 17 of this permit. The permittee must provide all information called for by the form.

58.4 If requested by the department, the permittee shall provide a more detailed written report as requested to follow up an excess emissions report.

[18 AAC 50.346(c), 5/3/02]

59. NSPS and NESHAP Reports. The permittee shall:

59.1 attach to the facility operating report required by condition 60, copies of any NSPS and NESHAPs reports submitted to the U.S. Environmental Protection Agency (EPA) Region 10 as required by conditions 24.1 and 34, unless copies have already been provided to the department at the time submitted to EPA, and

59.2 provide the department a copy of any EPA-granted waiver of the federal emission standards, recordkeeping, monitoring, performance testing, or reporting requirements, or approved custom monitoring schedules upon request.

[18 AAC 50.040, 7/2/00]
[18 AAC 350(i)(2), 1/18/97]
[40 C.F.R. 60 & 40 C.F.R. 61, 7/1/99]

60. Operating Reports. During the life of this permit, the permittee shall submit an original and two copies of an operating report by April 30 for the period January 1 to March 31, by July 30 for the period April 1 to June 30, by October 30 for the period July 1 to September 30, and by February 15 for the period October 1 to December 31.

60.1 The operating report must include all information required to be in operating reports by other conditions of this permit.

60.2 If excess emissions or permit deviations that occurred during the reporting period are not reported under condition 60.1, either

a. The permittee shall identify

(i) the date of the deviation;

(ii) the equipment involved;

(iii) the permit condition affected;

(iv) a description of the excess emissions or permit deviation; and

(v) any corrective action or preventive measures taken and the date of such actions; or

b. when excess emissions or permit deviations have already been reported under condition 58 the permittee may cite the date or dates of those reports.

[18 AAC 50.346(b)(3), 5/3/02]

61. Annual Compliance Certification. For periods after the effective date of this permit, each year by March 31, the permittee shall compile and submit to the department an original and two copies of an annual compliance certification report as follows:

[18 AAC 50.350(j), 1/18/97]

61.1 For each permit term and condition set forth in Section 4 through Section 10, and Section 13 including terms and conditions for monitoring, reporting, and recordkeeping:

[18 AAC 50.350(d)(4), 12/30/00]
[18 AAC 50.345(j), 5/3/02]

a. certify the compliance status over the preceding calendar year, except for the period prior to the effective date of this permit, consistent with the monitoring required by this permit;

b. state whether compliance is intermittent or continuous;

c. briefly describe each method used to determine the compliance status; and

d. notarize the responsible official's signature.

61.2 In addition, submit a copy of the report directly to the EPA-Region 10, Office of Air Quality, M/S OAQ-107, 1200 Sixth Avenue, Seattle, WA 98101.

Section 11. Standard Conditions Not Otherwise Included in the Permit

62. The permittee must comply with each permit term and condition. Noncompliance with a permit term or condition constitutes a violation of AS 46.14, 18 AAC 50 and, except for those terms or conditions designated in the permit as not federally-enforceable the Clean Air Act, and is grounds for

62.1 an enforcement action;

62.2 permit termination, revocation and reissuance, or modification in accordance with AS 46.14.280; or

62.3 denial of an operating-permit renewal application.

[18 AAC 50.350(b)(3), 1/18/97 & 18 AAC 50.345(c), 5/3/02]

63. It is not a defense in an enforcement action to claim that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with a permit term or condition.

[18 AAC 50.350(b)(3), 1/18/97 & 18 AAC 50.345(d), 5/3/02]

64. Each permit term and condition is independent of the permit as a whole and remains valid regardless of a challenge to any other part of the permit.

[18 AAC 50.350(b)(3), 1/18/97 & 18 AAC 50.345(e), 5/3/02]

65. Compliance with permit terms and conditions is considered to be compliance with those requirements that are

65.1 included and specifically identified in the permit; or

65.2 determined in writing in the permit to be inapplicable.

[18 AAC 50.350(b)(3), 1/18/97 & 18 AAC 50.345(b), 5/3/02]

66. The permit may be modified, reopened, revoked and reissued, or terminated for cause. A request by the permittee for modification, revocation and reissuance, or termination or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

[18 AAC 50.350(b)(3), 1/18/97 & 18 AAC 50.345(f), 5/3/02]

67. The permit does not convey any property rights of any sort, nor any exclusive privilege.

[18 AAC 50.350(b)(3), 1/18/97 & 18 AAC 50.345(g), 5/3/02]

68. The permittee shall allow the department or an inspector authorized by the department, upon presentation of credentials and at reasonable times with the consent of the owner or operator, to

68.1 enter upon the premises where a source subject to the operating permit is located or where records required by the permit are kept;

68.2 have access to and copy any records required by the permit;

68.3 inspect any facility, equipment, practices, or operations regulated by or referenced in the permit; and

68.4 sample or monitor substances or parameters to assure compliance with the permit or other applicable requirements.

[18 AAC 50.350(b)(3), 1/18/97 & 18 AAC 50.345(h), 5/3/02]

Section 12. Permit As Shield from Inapplicable Requirements

In accordance with AS 46.14.290, and based on information supplied in the facility application, this section of the permit contains the requirements determined by the department not to be applicable to the Kuparuk Central Production Facility #3.

Table 5 identifies the sources that are not subject to the specified requirements at the time of permit issuance. Some of the requirements listed below may become applicable during the permit term due to an invoking event, even though the requirement is deemed inapplicable at the time of permit issuance.

69. If any of the requirements listed in Table 5 become applicable during the permit term, the permittee shall comply with such requirements on a timely basis. The permittee shall also apply for a construction permit or an operating permit revision, if necessary.

Table 5 - Permit Shields Granted.

Shield requested for:	Reason for shield decision:
Gas-Fired Heaters & Other Equipment (Drill Site Heaters)	
40 CFR 60 Subpart D -Standards of Performance for Fossil-Fuel-Fired Steam Generators	Heat input capacities below threshold (250 MMBtu/hr); and units not classified as *Fossil-Fuel-Fired Steam Generators,* as defined in subpart.
40 CFR 60 Subpart Da -Standards of Performance for Electric Utility Steam Generating Units	Heat input capacities below threshold (250 MMBtu/hr); and units not classified as *Electric Utility Steam Generating Units,* as defined in subpart.
40 CFR 60 Subpart Db -Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units	Heat input capacities below threshold (100 MMBtu/hr).
Gas-Fired Heater H-EF04	
40 CFR 60 Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units	Heat input capacity below threshold (10 MMBtu/hr); and commenced construction prior to effective date of subpart (6/8/89).
Gas-Fired Heater H-EF03 and all Drill Site Heaters except H-K07-01	
40 CFR 60 Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units	Commenced construction prior to effective date of subpart (6/8/89).
Drill Site Heater H-K07-01	
40 CFR 60 Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units §60.42c - Standard for Sulfur Dioxide (SO_2)	Standards for SO_2 and PM and related performance test, monitoring and reporting requirements are not applicable for an affected facility fired on fuel gas.
§60.43c - Standard for Particulate Matter (PM)	

Shield requested for:	Reason for shield decision:
§§60.44c - Compliance and Performance Test Methods and Procedures for SO_2 40 CFR 60 Subpart A - General Provisions §60.8 - Performance Test	
§60.45c - Compliance and Performance Test Methods and Procedures for PM §60.8 - Performance Test	
§60.46c - Emission Monitoring for SO_2	
§60.47c - Emission Monitoring for PM	
§60.48c(a)(4)-(f) & (h) - Reporting and Recordkeeping Requirements	
§60.48c(a)(2)-(3) - Reporting and Recordkeeping Requirements	Facility is not subject to any requirements that limit the annual capacity factor for any fuel or mixture of fuels. Facility fires only fuel gas.
40 CFR 60 Subpart A - General Provisions §60.7(a)(1), (2) & (3) - Notification and Recordkeeping **(Initial Notification)** 40 CFR 60 Subpart Dc §60.48c(a)(1) – Notifications	Obsolete requirements - completed as required
§60.7(a)(4) – Notification and Recordkeeping	This requirement only applies to "existing facilities", as defined in 40 CFR 60.2.
§60.7(c) & (d) – Excess Emissions Reporting 40 CFR 60 Subpart Dc	The provisions of §60.7(c) & (d) apply only to New Source Performance Standards which require the installation of a continuous monitoring system (CMS) or monitoring device, as defined in §60.2; PAI is not required to install a CMS or monitoring device per Subpart Dc.
Flares: H-EF01B, H-EF02B, and H-EF06	
40 CFR 60, Subpart A – General Provisions §60.18 – Control Device Requirements	These flares are not control devices used to comply with applicable subparts of 40 CFR 60 and 40 CFR 61
Flare H-EF05	
40 CFR 60 Subpart A – General Provisions §60.18(c)(4) and §60.18(f)(5) - General Control Device Requirements: Exit Velocity Requirements for Steam-assisted and Non-assisted Flares	This flare is not steam-assisted or non-assisted; it is air-assisted.
40 CFR 60 – Subpart Kb - §115b(d)(1) 40 CFR 60 Subpart A – General Provisions §60.8(a) - General Control Device Requirements: Initial Reporting and Performance Tests	Obsolete requirements – completed as required; see letter of 28 August 2001 to the Administrator and copied to the department.

Shield requested for:	Reason for shield decision:
All Storage Tanks	
40 CFR 60 Subpart K- Standards of Performance for Storage Vessels for Petroleum Liquids	Commenced construction after effective date of subpart (5/19/78).
40 CFR 60 Subpart Ka –Standards of Performance for Storage Vessels for Petroleum Liquids.	Commenced construction after effective dates of subpart (5/18/78 - 7/23/84).
Storage Tanks: T-EF05, T-EF06, T-EF33, T-EF51, T-EF52, T-3F01, T-3I01, and T-3Q01	
40 CFR 60 Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels)	Vessel not storing a *volatile organic liquid* or *petroleum liquid*, as defined in subpart; and/or vessel storage capacity below thresholds; and/or vapor pressure of stored liquid below thresholds; and/or storage prior to custody transfer.
Storage Tank T-EF01	
40 CFR 60 – Subpart Kb §60.113b(c) – Testing and Procedures (Operating and Maintenance Plan) §60.115b(c) – Reporting and Recordkeeping Requirements	A source equipped with a flare control device is exempt from these requirements. Vapors from this tank are vented directly to, and controlled by, the Kaldair flare (tag no. H-EF05).
40 CFR Subpart Kb §60.116b(c) & (d) - Monitoring of Operations	Vessel equipped with a closed vent system and control device meeting the specifications of §60.112b is exempt from monitoring provisions of §60.116b(c) and (d) [ref. §60.116b(g)].
40 CFR 60 Subpart A - General Provisions §60.7(c) & (d) - Excess Emissions Reporting	The provisions of §60.7(c) & (d) apply only to New Source Performance Standards which require the installation of a continuous monitoring system (CMS) or monitoring device, as defined in §60.2; PAI is not required to install a CMS or monitoring device per Subpart Kb.

Storage Tanks: T-EF03, T-EF20, T-EF62, and KP-4122 Drill Site Storage Tanks: T-3A01, T-3B01, T-3C01, T-3G01, T-3H01, T-3J01, T-3K01, T-XX02, T-3N01, and T-3O01	
40 CFR 60 Subpart Kb §60.112b- Standard for Volatile Organic Compounds (VOC)	T-EF03: Except as specified in paragraphs (a) and (b) of 60.116b, vessels with a capacity ≥151 m^3 storing a liquid with a maximum true vapor pressure <3.5 kPa (0.5 psia) are exempt from General Provisions – Subpart A, and from the provisions of Subpart Kb. T-EF20 and Drill Site Tanks: Except as specified in paragraphs (a) and (b) of 60.116b, vessels with a capacity ≥75 m3 but < 151 m^3 storing a liquid with a maximum true vapor pressure < 15 kPa (2.18 psia) are exempt from General Provisions – Subpart A, and from the provisions of Subpart Kb T-EF62, KP-4122: Except as specified in paragraphs (a) and (b) of 60.116b, vessels with a capacity <75 m^3 are exempt from General Provisions - Subpart A, and from the provisions of Subpart Kb.
§60.113b -Testing and Procedures	
§60.114b -Alternative Means of Emission Limitation	
§60.115b -Reporting and Recordkeeping Requirements	
§60.116b(c) - (g) – Monitoring of Operations	
40 CFR 60 Subpart A -General Provisions	
Gas-Fired Turbines	
40 CFR 60 Subpart GG -Standards of Performance for Stationary Gas Turbines §60.332(a)(1) - Standards for NO_X	Standard applies to *Electric Utility Stationary Gas Turbines,* as defined in subpart. Source is not an Electric Utility Stationary Gas Turbine as defined in Subpart GG.
§60.334(a) – Monitoring of Operations §60.335(c)(2) – Test Methods and Procedures	Applies only to affected turbines equipped with water injection to control emissions of NO_X. Source is not equipped with water injection to control emissions of NO_X.
40 CFR 60 Subpart GG §60.334(b) -Monitoring of Operations (Fuel Nitrogen Only) §60.335(a) - Test Methods and Procedures	EPA Region X waived fuel bound nitrogen monitoring for NSPS affected stationary gas turbines operated by PAI (ref. correspondence dated July 3, 1996).
§60.334(c) -Monitoring of Operations	The provisions of §60.334(c) apply only to turbines subject to §60.7(c). PAI is not required to install a CMS or monitoring device per Subpart GG, and therefore is not subject to §60.7(c).
40 CFR 60 Subpart A -General Provisions §60.7(a)(1), (2) & (3) -Notification and Recordkeeping (Initial Notification) §60.8(a) –Performance Test, (Initial	Obsolete requirements, completed as required

Performance Test Only) §60.335(b), (c)(l), (c)(3) - Test Methods and Procedures	
§60.7(a)(4) -Notification and Recordkeeping	This requirement only applies to "existing facilities", as defined in 40 CFR 60.2.
§60.7(c) & (d) -Excess Emissions Reporting 40 CFR 60 Subpart GG	The provisions of §60.7(c) & (d) apply only to New Source Performance Standards which require the installation of a continuous monitoring system (CMS) or monitoring device, as defined in §60.2; PAI is not required to install a CMS or monitoring device per Subpart GG.
Facility-Wide	
40 CFR 60 Subpart J -Standards of Performance for Petroleum Refineries	Facility does not meet the definition for a petroleum refinery
40 CFR 60 Subpart GGG -Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries	Facility does not meet the definition for a petroleum refinery
40 CFR 60 Subpart QQQ - Standards of Performance for VOC Emissions from Petroleum Refinery Wastewater Systems.	Facility does not meet the definition for a petroleum refinery
40 CFR 60 Subpart KKK - Standards of Performance for Equipment Leaks of VOC from Onshore Natural Gas Processing Plants	Facility does not engage in the forced extraction of natural gas liquids from field gas or in fractionation of mixed natural gas liquids to natural gas products.
40 CFR 60 Subpart LLL – Standards of Performance for Onshore Natural Gas Processing Plants: SO_2 Emissions	Facility does not operate *natural gas sweetening unit(s).*
40 CFR 61 Subpart E - National Emission Standards for Mercury.	Facility does not operate incinerators.
40 CFR 61 Subpart M - National Emission Standard for Asbestos §61.142 - Standard for Asbestos Mills	Facility is not an Asbestos Mill
§61.143 Standards for Roadways	Facility roadways not exposed to asbestos tailings or asbestos containing waste.
§61.144 Standard for Manufacturing	Facility does not engage in any manufacturing operations using commercial asbestos.
§61.146 -Standard for Spraying	Facility does not spray apply asbestos containing materials
§61.147 Standard for Fabricating	Facility does not engage in any fabricating operations using commercial asbestos.
§61.148 Standard for Insulating Materials	Facility does not install or reinstall, on any facility component, insulation material containing commercial asbestos.
§61.149 - Standard for Waste Disposal for Asbestos Mills	Applies only to those facilities subject to §61.142 (Asbestos Mills)

§61.151 - Standard for Inactive Waste Disposal Sites for Asbestos Mills and Manufacturing and Fabricating Operations	Applies only to those facilities subject to §§61.142, 61.144, or 61.147 (Asbestos Mills, manufacturing or fabricating)
§61.152 - Standard for Air-Cleaning	Facility does not use air cleaning equipment
§61.153 - Standard for Reporting	No reporting requirements apply for sources subject to §61.145 (demolition and renovation) [ref. §61.153(a)]
§61.154 - Standards for Active Waste Disposal Sites	Facility not an active waste disposal site and does not receive asbestos containing waste material.
§61.155 - Standard for Inactive Waste Disposal Sites for Asbestos Mills and Manufacturing and Fabricating Operations	Facility does not process regulated asbestos containing material (RACM)
Activities subject to 40 CFR 61 Subpart M – Standard for Demolition and Renovation (§61.145)	
40 CFR 61 Subpart A - General Provisions §61.05(a) - Prohibited Activities §61.07 - Application for Approval of Construction or Modification §61.09 -Notification of Startup	Owners or operators of demolition and renovation operations are exempt from the requirements of §§61.05(a), 61.07, and 61.09 [ref. 40 CFR 61. 145(a)(5)]
§61.10 - Source Reporting and Waiver Request	Demolition and renovation operations exempt from §61.10(a) [ref. 40 CFR 61. 153(b)]
§61.13 -Emission Tests §61.14 - Monitoring Requirements	Emission tests or monitoring is not required under the standards for demolition and renovation [§61.145]
Facility-Wide	
18 AAC 50.201 – Ambient Air Quality Investigation	This requirement is not applicable until such time as the department requests an air quality investigation.
40 CFR 61 Subpart J - National Emission Standard for Equipment Leaks (Fugitive Emission Sources) of Benzene	No process components in *benzene service*, as defined by subpart (10 percent benzene by weight).
40 CFR 61 Subpart V - National Emission Standard for Equipment Leaks (Fugitive Emission Sources)	Facility does not operate equipment in volatile hazardous air pollutant (VHAP) service (=10 percent VHAP by weight).
40 CFR 61 Subpart Y - National Emission Standard for Benzene Emissions from Benzene storage vessels	Facility does not operate storage vessels in benzene service
40 CFR 61 Subpart BB -National Emission Standard for Benzene Emissions from Benzene Transfer Operations	Facility does not conduct benzene transfer operations
40 CFR 61 Subpart FF - National Emission Standard for Benzene Waste Operations	Facility does not conduct benzene waste operations
40 CFR 61 Subpart A - General Provisions	Requirements only apply to sources subject to any provision of 40 CFR 61

40 CFR 63 Subpart B – Requirements for Control Technology Determinations for Major Sources in Accordance with Clean Air Act Sections 112(g) and 112(j).	Facility is not a major source of HAPs.
40 CFR 63 Subpart T - National Emission Standards for Halogenated Solvent Cleaning	Facility does not operate halogenated solvent cleaning machines.
40 CFR 63 Subpart CC - National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries	Facility does not meet the definition for a petroleum refinery.
40 CFR 63 Subpart HH - National Emission Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities	Facility is not a major source of HAP as defined in 40 CFR 63.761. Facility also qualifies for the "black oil exemption."
40 CFR 63 Subpart HHH - National Emission Standards for Hazardous Air Pollutants for Natural Gas Transmission and Storage Facilities	Facility is considered part of the oil and natural gas production source category (Subpart HH) and not part of the natural gas transmission and storage category (Subpart HHH) because it transports natural gas prior to the point of custody transfer where operations may be affected by Subpart HHH
40 CFR 63 Subpart A -General Provisions, except §63.1(b)(3) and §63.10(b)(3)	Requirements only apply to sources subject to any provision of 40 CFR 63. This facility is not subject to 40 CFR 63 Subpart A, except for the requirement to determine rule applicability (§63.1(b)(3)) and to keep records of rule applicability determination (§63.10(b)(3)).
40 CFR 64 – Compliance Assurance Monitoring, except for Source ID 13, T-EF01 (slop oil tank)	Does not use a control device to achieve compliance with any emission limitation or standard.
40 CFR 68 - Accidental Release Prevention Requirements: Risk Management Programs [§ 112(r)]	Naturally occurring hydrocarbon mixtures" (crude oil, condensate, natural gas and produced water) prior to entry into a petroleum refining process unit (NAICS code 32411) or a natural gas processing plant (NAICS code 211112) are exempt from the threshold determination. (See Final Rule exempting from threshold determination regulated flammable substances in naturally occurring hydrocarbon mixtures prior to initial processing, 63 FR 640 [January 6, 1998]). Less than 10,000 lbs. of other mixtures containing regulated flammable substances that meet the criteria for an NFPA rating of 4 for flammability are stored at the facility. Therefore, Central Production Facility #3, a crude petroleum and

	natural gas production facility, (NAICS code 211111) does not process or store regulated flammable or toxic substances in excess of threshold quantities.
40 CFR 82.1 Subpart A - Production and Consumption Controls	Facility does not produce, transform, destroy, import or export Class l or Group I or II substances or products.
40 CFR 82.30 Subpart B - Servicing of Motor Vehicle Air Conditioners	Facility does not service motor vehicle air conditioners
40 CFR 82.60 Subpart C -Ban on Nonessential Products Containing Class I Substances and Ban on Nonessential Products Containing or Manufactured with Class II Substances	Facility is not a manufacturer or distributor of Class I and II products or substances.
40 CFR 82.80 Subpart D – Federal Procurement	Subpart applies only to Federal departments, agencies, and instrumentalities.
40 CFR 82.100 Subpart E- The Labeling of Products Using Ozone-Depleting Substances.	Facility is not a manufacturer or distributor of Class I and II products or substances.
40 CFR 82.158 Subpart F - Recycling and Emissions Reduction.	Facility does not manufacture or import recovery and recycling equipment.
40 CFR 82.160- Approved Equipment Testing Organizations	Facility does not contract equipment testing organizations to certify recovery and recycling equipment.
40 CFR 82.164 –Reclaimer Certification	Facility does not sell reclaimed refrigerant.
40 CFR 82, Subpart F, Appendix C - Method for Testing Recovery Devices for Use With Small Appliances	Facility is not a third party entity that certifies recovery equipment.
40 CFR 82, Subpart F, Appendix D - Standards for Becoming a Certifying Program for Technicians	Facility does not have a technician certification program.
40 CFR 82. 174(a) Subpart G - Significant New Alternatives Policy Program: Prohibitions	Facility does not manufacture substitute chemicals or products for ozone- depleting compounds.
40 CFR 82.270(a) Subpart H - Halon Emissions Reduction	Facility does not manufacture halon.
All Storage Tanks	
40 CFR 63 Subpart OO - National Emission Standards for Tanks - Level 1	Provisions only apply to tanks affected by 40 CFR 60, 61, or 63 that specifically reference 40 CFR 63 Subpart OO.
Drain Systems	
40 CFR 63 Subpart RR - National Emission Standards for Individual Drain Systems	Provisions only apply to drain systems affected by 40 CFR 60, 61, or 63 that specifically reference 40 CFR 63 Subpart RR
Oil-Water Separators	
40 CFR 63 Subpart VV -National Emission Standards for Oil-Water Separators and Organic-Water Separators	Provisions only apply to oil-water separators and organic-water separators affected by 40 CFR 60, 61, or 63 that specifically reference 40 CFR 63 Subpart VV

[18 AAC 50.350(l), 1/18/97]

Section 13. Visible Emissions and PM Monitoring, Recordkeeping and Reporting

Emergency Equipment

70. Visible Emissions Monitoring and Reporting. If required by condition 3.2 or 3.4 the permittee shall perform the visible emission monitoring and reporting as follows:

70.1 Visible Emissions Monitoring - the permittee shall perform a Method 9 visible emissions observation within 90 calendar days after triggering this condition. The observation shall be conducted for 18 minutes to obtain 72 individual 15-second readings. If 18 consecutive minutes of Method 9 observations result in an 18 minute average opacity greater than 20 percent, the permittee shall perform corrective action under condition 71. The start of a new calendar year does not negate this requirement.

70.2 Visible Emissions Reporting - the permittee shall include in the facility operating report required under condition 60 a summary of the results of all Method 9 readings performed under condition 70.1.

71. Corrective Actions. If required under condition 70.1, perform corrective action within 14 days and conduct a follow-up Method 9 observation under condition 70.1 within 30 days of completing the corrective action.

71.1 Record keeping – if applicable, keep a written record of the starting date, the completion date, and a description of any actions taken under condition 71 to reduce visible emissions.

71.2 Reporting – submit with the facility operating report required under condition 60 copies of any records required under condition 71.1.

72. Particulate Matter Monitoring and Reporting. If required by condition 4.2 or 4.4, the permittee shall conduct source tests to determine the concentration of PM in the exhaust as follows:

72.1 PM Monitoring - except as provided in condition 72.3, conduct a PM source test according to the requirements set out in Section 9 no later than 180 calendar days after the first follow-up Method 9 observation performed under condition 70.1 results in an 18-minute average opacity greater than 20 percent.

72.2 PM Reporting -

a. During each PM source test, perform a visible emission evaluation, in accordance with condition 70.1, and submit a summary of the results to the department with the PM source test report in accordance with condition 52.

b. The permittee shall report as excess emissions under condition 58 any time the results of a source test for PM exceed the PM emission limit stated in condition 4.

72.3 The automatic PM source test requirement in condition 72.1 is waived for an emission unit if

a. a PM source test on that unit has shown compliance with the PM standard since permit issuance, or

b. if a follow-up visible emission observation conducted using Method-9 during the 180 days shows that the situation described in condition 72.1 no longer occurs.

[18 AAC 50.335(g) & 50.350(g) – (i), 1/18/97]

Flares (Source ID(s) 11 through 14)

73. Visible Emissions Monitoring, Recordkeeping, and Reporting. The permittee shall observe the first six daylight flare events[6] occurring during the life of this permit[7].

73.1 Monitor flare events using Method-9 for 18 minutes to obtain 72 individual 15-second readings.

73.2 Record the following information for observed events:

a. the flare(s) Source ID number;

b. results of the Method-9 observations;

c. reason(s) for flaring;

d. date, beginning and ending time of event; and

e. cumulative volume of gas flared.

73.3 Until monitoring has been completed on the six flare events described in this condition, the permittee shall either monitor each qualifying flare event or include in the next report required by condition 60 an explanation of the reason the event was not monitored. Monitoring of a flare event may be postponed for safety or weather reasons, or because a qualified observer is not available.

73.4 Attach copies of the records required by condition 73.2 with the facility operating report required by condition 60.

[6] For purposes of this permit, a "flare event" is flaring of gas for greater than one hour as a result of scheduled lease operations, i.e. maintenance or well testing activities. It does not include non-scheduled lease operations, i.e. process upsets, emergency flaring, or de minimis venting of gas incidental to normal operations.

[7] Flare events monitored within 12-months prior to permit effective date may count towards the six-event total.

73.5 Report under condition 58 whenever the opacity standard in condition 3 is exceeded.

[18 AAC 50.350(g) – (i), 1/18/97]

Section 14. Visible Emissions Forms

Visible Emissions Field Data Sheet

Certified Observer: _____

Company: _____

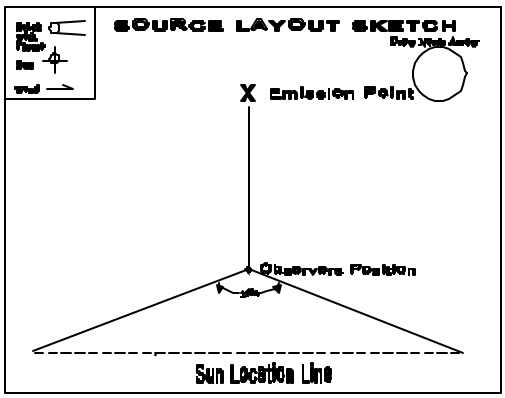
Location: _____

Test No.: _____ Date: _____

Source: _____

Operating Rate: _____

_____



Clock Time	Initial				Final
Observer location Distance to discharge					
Direction from discharge					
Height of observer point					
Background description					
Weather conditions Wind Direction					
Wind speed					
Ambient Temperature					
Relative humidity					
Sky conditions: (clear, overcast, % clouds, etc.)					
Plume description: Color					
Distance visible					
Water droplet plume? (Attached or detached?)					
Other information					

Visible Emissions Observation Record

Page ___ of ___

Company _____ Certified Observer_____

Test Number _____ Clock time_____

Date:		Visibility reduction every 15 Seconds (Opacity)				Steam Plume (check if applicable)		Comments
Hr	Min	0	15	30	45	Attached	Detached	

Additional information:

_____
Observer Signature

Data Reduction:
Duration of Observation Period (minutes) _____
Number of Observations _____
Number of Observations exceeding 20% _____

Average Opacity Summary

Set Number	Time Start—End	Opacity	
		Sum	Average

Section 15. SO_2 Material Balance Calculation

SO_2 Material Balance Calculation

If a fuel shipment contains more than 0.75 percent sulfur by weight, calculate the three-hour exhaust concentration of SO_2 using the following equations:

A = 31,200 X [wt%S_{fuel}] = 31,200 X _____ = _____

B = 0.148 X [wt%S_{fuel}] = 0.148 X _____ = _____

C = 0.396 X [wt%C_{fuel}] = 0.396 X _____ = _____

D = 0.933 X [wt%H_{fuel}] = 0.933 X _____ = _____

E = B + C + D = _____ + _____ + _____ = _____

F = 20.9 – [vol%$_{dry}O_{2,\ exhaust}$] = 20.9 - _____ = _____

G = [vol%$_{dry}O_{2,\ exhaust}$] ÷ F = _____ ÷ _____ = _____

H = 1 + G = 1 + _____ = _____

I = E x H = _____ x _____ = _____

SO_2 concentration = A ÷ I = _____ ÷ _____ = _____ PPM

The wt%S_{fuel}, wt%C_{fuel}, and wt%H_{fuel} are equal to the weight percents of sulfur, carbon, and hydrogen in the fuel. These percentages should total 100%.

The fuel weight percent (wt%) of sulfur is obtained pursuant to condition XI.2. The fuel weight percents of carbon and hydrogen are obtained from the fuel refiner.

The volume percent of oxygen in the exhaust (vol%$_{dry}O_{2,\ exhaust}$) is obtained from oxygen meters, manufacturer's data, or from the most recent analysis under 40 C.F.R. 60, Appendix A-2, Method 3, adopted by reference in 18 AAC 50.040(a), at the same engine load used in the calculation.

Enter all of the data in percentages without dividing the percentages by 100. For example, if **wt%S_{fuel}** = 1.0%, then enter 1.0 into the equations, not 0.01, and if **vol%$_{dry}O_{2,\ exhaust}$** = 3.00%, then enter 3.00, not 0.03.

[18 AAC 50.346(c), 5/3/02]

Section 16. Emission Factors

Table 6 - Emission Factors

Type of Equipment	NO_X	SO_2	CO	PM	VOC
Gas Turbines (All) GE Frame 5 GE Frame 3 Ruston (TB5000)	Allowable concentration or representative source test data if less than allowable concentration	Actual monthly H_2S concentration	0.082 lb/MMBtu (AP-42)	14.0 lb/MMscf	0.0021 lb/MMBtu (AP-42)
Drill Site Heaters (All)	0.08 lb/MMBtu	Actual monthly H_2S concentration	0.018 lb/MMBtu	2.5 lb/MMscf	None Applicable

Note: GE Frame 5 is turbine tag number G-EF03. GE Frame 3(s) are turbine tag numbers C-EF01-A and C-EF01-B. Ruston turbines are tag numbers P-EF52-A, P-EF52-B, and G-EF01-A.

Section 17. ADEC Notification Form

Fax this form to: (907) 269-7508 Telephone: (907) 269-8888

Phillips Alaska Inc
Company Name

Kuparuk Central Production Facility #3
Facility Name

Reason for notification:

❑ **Excess Emissions** — *If you checked this box Fill out section 1*

❑ **Other Deviation from Permit Condition** — *If you checked this box fill out section 2*

When did you discover the Excess Emissions or Other Deviation:
Date:__/__/__ Time:__:__

Section 1. Excess Emissions

(a) Event Information (Use 24-hour clock):

	START Time: (hr:min):	**END** Time:	**Duration**
Date: _____	_____:_____	_____:_____	_____:_____
Date: _____	_____:_____	_____:_____	_____:_____
		Total:	_____:_____

(b) Cause of Event (Check all that apply):

❑ START UP ❑ UPSET CONDITION ❑ CONTROL EQUIPMENT
❑ SHUT DOWN ❑ SCHEDULED MAINTENANCE ❑ OTHER _____

Attach a detailed description of what happened, including the parameters or operating conditions exceeded.

(c) Sources Involved:

Identify each emission source involved in the event, using the same identification number and name as in the permit. List any control device or monitoring system affected by the event. Attach additional sheets as necessary.

Source ID No.	Source Name	Description	Control Device

(d) Emission Limit Potentially Exceeded

Identify each emission standard potentially exceeded during the event. Attach a list of ALL known or suspected injuries or health impacts. Identify what observation or data prompted this report. Attach additional sheets as necessary.

Permit Condition	Limit	Emissions Observed

(e) Excess Emission Reduction:

Attach a description of the measures taken to minimize and/or control emissions during the event.

(f) Corrective Actions:

Attach a description of corrective actions taken to restore the system to normal operation and to minimize or eliminate chances of a recurrence.

(g) Unavoidable Emissions:

Do you intend to assert that these excess emissions were unavoidable?

❑ YES ❑ NO

Do you intend to assert the affirmative defense of 18 AAC 50.235?

❑ YES ❑ NO

Section 2. Other Permit Deviations

(a) Sources Involved:

Identify each emission source involved in the event, using the same identification number and name as in the permit. List any control device or monitoring system affected by the event. Attach additional sheets as necessary.

Source ID No.	Source Name	Description	Control Device

(b) Permit Condition Deviation:

Identify each permit condition deviation or potential deviation. Attach additional sheets as necessary.

Permit Condition	Potential Deviation

(c) Corrective Actions:

Attach a description of actions taken to correct the deviation or potential deviation and to prevent recurrence.

Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.

Printed Name:

Signature: Date

Alaska Department of Environmental Conservation

Air Permits Program

December 2, 2002

Minor Revision 1, April 18, 2003

Phillips Alaska Inc

Kuparuk Central Production Facility #3

LEGAL AND FACTUAL BASIS

of the terms and conditions for

Permit No. 171TVP01

Prepared by Robert Dolan and Grace Germain

Revised by Don Bodron

INTRODUCTION

This document sets forth the legal and factual basis for the terms and conditions of Operating Permit No. 171TVP01.

FACILITY IDENTIFICATION

Section 1 contains information on the facility as provided in the title V permit application as amended through June 27, 2001 and in supplemental information dated August 10, 2001 and November 12, 2002.

The facility is operated by Phillips Alaska Inc, and Phillips Alaska Inc is the permittee for the facility's operating permit. Three phase crude oil is transferred from the surrounding production pads to CPF#3 where it is separated into crude oil for sale, produced water for reinjection, and natural gas for further processing as fuel and for reinjection.

SOURCE INVENTORY AND DESCRIPTION

Table 1 contains information on the sources at the facility as provided in the application. Table 1 describes the sources regulated by the permit. The table is provided for information and identification purposes only. Specifically, the source rating/size provided in the table does not create an enforceable limit.

EMISSIONS

Table A contains emission information as provided in the application. A summary of the potential to emit (PTE)[8] from the Kuparuk Central Production Facility #3 is shown in the table below.

Table A - Emissions Summary, in Tons Per Year (tpy)

Pollutant	NO_X	CO	PM-10	SO_2	VOC	Total
PTE	2340	758	72	167	18	3355
Assessable PTE	2340	758	72	167	18	3355

The assessable PTE listed under condition 1.1 is the sum of the emissions of each individual regulated air contaminant for which the facility has the potential to emit quantities greater than 10 tpy.

[8] *Potential to Emit* or *PTE* means the maximum quantity of a release of an air contaminant, considering a facility's physical or operational design, based on continual operation of all sources within the facility for 24 hours a day, 365 days a year, reduced by the effect of pollution control equipment and approved state or federal limitations on the capacity of the facility's sources or the facility to emit an air contaminant, including limitations such as restrictions on hours or rates of operation and type or amount of material combusted, stored, or processed. . . as defined in AS 46.14.990(21), effective 1/18/97.

BASIS FOR REQUIRING AN OPERATING PERMIT

Section 2 includes a description of the regulatory classifications of the Kuparuk Central Production Facility #3. This facility is classified as a Prevention of Significant Deterioration (PSD) Major Facility as defined in 18 AAC 50.300 (c)(1), because it has the potential to emit 250 tpy of a regulated air contaminant in an area designated attainment or unclassifiable for that air contaminant under 18 AAC 50.015. In addition, the facility contains equipment with a rated capacity of 100 million Btu per hour or more so requires a permit under 18 AAC 50.300(b)(2). The facility requires an operating permit under 18 AAC 50.325(b)(1 & 3) because it has the potential to emit more than 100 tpy of a regulated air contaminant and has source(s) subject to new source performance standards.

Alaska regulations require operating permit applications to include identification of "regulated sources." As applied to Kuparuk Central Production Facility #3, the state regulations require a description of:

⇒ Each source regulated by a standard in 18 AAC 50.055, Industrial Processes and Fuel Burning Equipment, under18 AAC 50.335(e)(4)(C);

⇒ Each source subject to a standard adopted by reference in 18 AAC 50.040 under 18 AAC 50.335(e)(2); and

⇒ Sources subject to requirements in an existing department permit 18 AAC 50.335(e)(5).

The emission sources at Kuparuk Central Production Facility #3 classified as "regulated sources" according to the above department regulations are listed in Table 1 of Operating Permit No. 171TVP01.

CURRENT AIR QUALITY PERMITS

Previous Air Quality Permits

The most recent permit issued for this facility is permit-to-operate number 9373-AA006. This permit-to-operate includes all construction authorizations issued through August 2, 1996, and was issued before January 18, 1997. Construction permit 171CP01 is currently under review by the department and will be issued concurrently with operating permit 171TVP01. In addition, an EPA Prevention of Significant Deterioration (PSD) permit number PSD-X82-01, as amended through 10/7/1997, contained specific BACT requirements for the facility. All facility-specific requirements established in these previous permits are included in the new operating permit as described below.

Title-V Operating Permit Application History

The owner or operator submitted an application on November 20, 1997.

The owner or operator amended this application on January 20, 1998, May 12, 1998, June 18, 1999 and June 27, 2001.

Additional information documenting the installation or most recent modification dates of each source at CPF#3was submitted on August 10, 2001. Additional Information documenting the reconstruction of Source ID 1 was submitted on November 12, 2002.

COMPLIANCE HISTORY

The facility has operated at its current location since 1984. Review of the permit files for this facility, which includes the past inspection reports indicate a facility generally operating in compliance with its operating permit.

FACILITY-SPECIFIC REQUIREMENTS CARRIED FORWARD

Operating Permit

State of Alaska regulations in 18 AAC 50.350(d)(1)(D) require that an operating permit include each facility-specific requirement established in a prior construction permit. The table below lists the permit condition that established a requirement in Operating Permit No. 9373-AA006 (8/2/96 amendment) and the new condition in Operating Permit No. 171TVP01 that carries the old requirement into the new permit.

Table B - Comparison of Pre-January 18, 1997 Permit No. 9373-AA006 (8/2/96 amendment) Conditions to Operating Permit No. 171TVP01 Conditions[9]

Permit No. 9373-AA006 condition	Description of Requirement	Permit No. 171TVP01 condition	How condition was revised
2	Permittee shall comply with the most stringent of applicable emission standards and specifications set out in….and Exhibit B	6 - 10	These limitations have been carried in a simpler format based on revised EPA PSD permit PSD-X82-01 and construction permit 171CP01. Individual equipment unit limits have been replaced by equipment type group limits. Emission rates have been eliminated since they are not limits. No increase in emissions.
3	If installation of the Advanced Technology Upgrade parts for any source has not begun within 18 months….the permittee shall submit a request for a permit amendment which includes an updated control technology analysis and construction schedule.	None	Not needed. The 18-month review only applies to PSD permitting actions. This condition applies to a project and permitting action that avoided PSD.
5	Permittee shall limit the increase in emissions of the oxides of nitrogen from the GE Frame 5	12	No change.

[9] This table does not include all standard and general conditions

Permit No. 9373-AA006 condition	Description of Requirement	Permit No. 171TVP01 condition	How condition was revised
	turbine after the ATP upgrade to 35 tons per year when using the N-liners.		
6	Permittee shall notify the department within 7 days of retrofitting the GE Frame 5 turbine (ATP upgrade) with N-liners.	None	Task completed and notification received.
7	Permittee shall collect and report those control parameter(s) as outlined in Exhibit C for the GE 5 turbine (ATP upgrade) that are pertinent to meet the requirements of condition 5 & 6. The parameters shall be included as part of the facility operating report described in Exhibit D.	None	Task completed.
8	Permittee shall calculate the total quantity of sulfur dioxide from the facility each month and report the result in the facility operating report.	None	Condition has been deleted per Construction Permit No. 171CP01. Reason for original permit condition is no longer valid. Potential increase of fuel gas sulfur content not considered a PSD modification.
13	Permittee shall install, maintain, and operate a continuous monitoring system, as described in Exhibit C, to measure or estimate fuel consumption by Group I (turbines), Group II (Broach and Howe-Baker heaters), the flares, and the drill site heater sources. For other sources, such as emergency equipment, the fuel consumption may be estimated.	11	No change.
14	Permittee shall conduct a monthly test of the fuel gas to determine the sulfur (H_2S) content of the gas burned in the turbines and heaters as described in Exhibit C.	13	No change.
19	Permittee shall maintain, monitoring for not less than one year, and accessible to the department for not less than three years.	57	Record retention is now five years per regulation. Standard condition.

Construction Permit

State of Alaska regulations in 18 AAC 50.350(d)(1)(D) require that an operating permit include each facility-specific requirement established in a prior construction permit. The table below lists the permit condition that established a requirement in Construction Permit No. 171CP01 and the new condition in Operating Permit No. 171TVP01 that carries the old requirement into the new permit.

Table C - Comparison of Construction Permit No. 171CP01 Conditions to Operating Permit No. 171TVP01 Conditions[10]

Permit No. 171CP01 condition	Description of Requirement	Permit No. 171TVP01 condition	How condition was revised
4	Exhibit B replaces the original Exhibit B in operating permit 9373-AA006	6 - 10	No change
24	Includes SIP limits for industrial processes and fuel-burning equipment, opacity, particulate matter, and sulfur dioxide.	3 - 5	No change
Exhibit A	Source inventory list	Section 3	Minor corrections have been made to list based on new information.
Exhibit B	BACT Emission Limits	6 - 10	Limits have been revised per revised EPA PSD permit PSD-X82-01. Individual equipment unit limits have been replaced by equipment type group limits. No increase in emissions.
Exhibit C	Monitoring – Fuel gas meters for Turbines and Heaters. H_2S content of natural gas fuel used.	11 and 13	No change

[10] This table does not include all standard and general conditions

LEGAL AND FACTUAL BASIS FOR THE PERMIT CONDITIONS

Legal Basis: The state and federal regulations for each condition are cited in Operating Permit No. 171TVP01.

Conditions 1 and 2, Emission Fees

Applicability: The regulations require all permits to include due dates for the payment of fees and any method the permittee may use to re-compute assessable emissions.

Factual Basis: These standard conditions require the permittee to pay fees in accordance with the department's billing regulations. The billing regulations set the due dates for payment of fees based on the billing date.

The default assessable emissions are emissions of each air contaminant authorized by the permit (AS 46.14.250(h)(1)(A)). Air contaminant means any regulated air contaminant and any hazardous air contaminant. Therefore, assessable emissions under 18 AAC 50.250(h)(1)(A) means the potential to emit any air contaminant identified in the permit, including those not specifically limited by the permit. For example, hydrogen chloride (HCl) emissions from an incinerator are assessable emissions because they are a hazardous air contaminant, even if there is currently no emission limit on HCl for that class of incinerator.

The conditions also describe how the permittee may calculate **actual** annual assessable emissions based on previous actual annual emissions. According to AS 46.14.250(h)(1)(B), assessable emissions are based on each air contaminant. Therefore, fees based on actual emissions must also be paid on any contaminant emitted whether or not the permit contains any limitation of that contaminant.

This standard condition specifies that, unless otherwise approved by the department, calculations of assessable emission based on actual emissions use the most recent previous calendar year's emissions. Since each current year's assessable emission are based on the previous year, the department will not give refunds or make additional billings at the end of the current year if the estimated emissions and current year actual emissions do not match. The permittee will normally pay for actual emissions - just with a one-year time lag.

Projected actual emissions may differ from the previous year's actual emissions if there is a change at the facility, such as changes in equipment or an emission rate from existing equipment.

If the permittee does not choose to annually calculate assessable emissions, emissions fees will be based on “potential to emit” (PTE).

The PTE set forth in the condition is based on diesel fuel with 0.5% by weight sulfur content or fuel gas with a sulfur content of 200 ppm H_2S by volume. If the actual sulfur content of the fuel is greater than these assumptions, the assessable emissions calculations provided by the permittee should reflect the actual sulfur content.

Conditions 3 and Section 13 - Visible Emissions Standard

Applicability: This regulation applies to operation of all fuel-burning equipment in Alaska.

Factual basis: Condition 3 requires the permittee to comply with the federal and the state visible emission standards applicable to fuel-burning equipment and incinerators. The permittee shall not cause or allow the equipment to violate these standards.

This condition has recently been adopted into regulation as a standard condition.

Gas Fired:

Monitoring – The monitoring of gas fired sources for visible emissions is waived, i.e. no source testing will be required. The department has found that gas fired equipment inherently has negligible PM emissions. However, the department can request a source test for PM emissions from any smoking equipment.

Reporting – The permittee must annually certify that only gaseous fuels are used in the equipment.

Liquid Fired:

Monitoring – The visible emissions may be observed by Method-9 as detailed in Section 13. Corrective actions such as maintenance procedures and more frequent testing may be required depending on the results of the observations.

Recordkeeping - The permittee is required to record the results of all visible emission observations and record any actions taken to reduce visible emissions.

Reporting - The permittee is required to report: 1) emissions in excess of the federal and the state visible emissions standard, 2) and deviations from permit conditions. The permittee is required to include copies of the results of all visible emission observations with the facility operating report.

Insignificant Sources:

For Source ID 7, the dual-fuel fired standby Broach Emergency Heater, monitoring is waived in accordance with recently issued Department Guidance AWQ 02-014 as long as the unit does not operate more than 400 hours per year on liquid fuel. The permittee must annually certify compliance with the opacity standard.

For Source IDs 9 and 10, no monitoring is required because these sources are insignificant sources based on actual emissions. As long as the engines operate less than 275 and 440 hours, respectively, they are insignificant by emissions as specified in 18 AAC 50.335(r) and no monitoring is required in accordance with recently issued Department Guidance AWQ 02-014. The permittee must annually certify compliance with the opacity standard.

Flares:

Monitoring for flares (Source ID(s) 11 through 14) requires Method-9 observations of scheduled flaring events lasting more than one hour. The permittee must report the results of these observations to the department.

Condition 4 and Section 13, Particulate Matter (PM) Standard

Applicability: This regulation applies to operation of all fuel-burning equipment in the State of Alaska.

Factual basis: Condition 4 requires the permittee to comply with the state PM (also called grain loading) standard applicable to fuel-burning equipment. The permittee shall not cause or allow fuel-burning equipment to violate this standard.

This condition has recently been adopted into regulation as a standard condition.

Gas Fired:

Monitoring – The monitoring of gas fired sources for particulate matter is waived, i.e. no source testing will be required. The department has found that gas fired equipment inherently has negligible PM emissions. However, the department can request a source test for PM emissions from any smoking equipment.

Reporting – The permittee must annually certify that only gaseous fuels are used in the equipment.

Liquid Fired:

Monitoring – The permittee is required to conduct PM source testing if threshold values for opacity are exceeded.

Recordkeeping - The permittee is required to record the results of PM source tests.

Reporting - The permittee is required to report: 1) incidents when emissions in excess of the opacity threshold values have been observed, 2) and results of PM source tests. The permittee is required to include copies of the results of all visible emission observations with the facility operating report.

Insignificant Sources:

For Source ID 7, the dual-fuel fired standby Broach Emergency Heater, monitoring is waived in accordance with recently issued Department Guidance AWQ 02-014 as long as the unit does not operate more than 400 hours per year on liquid fuel. The permittee must annually certify compliance with the opacity standard.

For Source IDs 9 and 10, no monitoring is required because these sources are insignificant sources based on actual emissions. As long as the engines operate less than 275 and 440 hours, respectively, they are insignificant by emissions as specified in 18 AAC 50.335(r) and no monitoring is required in accordance with recently issued Department Guidance AWQ 02-014. The permittee must annually certify compliance with the particulate matter standard.

Flares:

Monitoring of gas fired flares for particulate matter is waived, i.e. no source testing will be required, because of the difficulty and questionable results these tests produce when applied to flares. The department has recognized this fact by incorporating the waiver in the State Implementation Plan adopted in November 1984 which has not been federally approved. No recordkeeping or reporting is required.

Condition 5, Sulfur Compound Emissions

Applicability: The sulfur emission standard applies to operation of all fuel-burning equipment in the State of Alaska. Source ID(s) 1 through 27 are fuel-burning equipment. The SIP standard for sulfur dioxide applies because it is contained in the federally approved SIP dated October 1983. Monitoring of sulfur dioxide emissions is accomplished by analysis of fuel sulfur content.

Factual basis: The condition requires the permittee to comply with the sulfur emission standard applicable to fuel-burning equipment. The permittee may not cause or allow their equipment to violate this standard.

Monitoring -

Diesel Fuel (Fuel Oil): Fuel Oil sulfur is measured in weight percent sulfur (wt% S). Calculations show that fuel containing no more than 0.75 wt% S will always comply with the emission standard. This is true for all liquid hydrocarbon fuels, even with no excess air. For fuels with a sulfur content higher than 0.75 wt% S, this condition requires the permittee to use the equations in Section 15 to calculate the exhaust gas SO_2 concentration, showing whether the standard was exceeded. The equations in Section 15 are all based on stoichiometric mass balance. [11]

Fuel Gas: Fuel gas sulfur is measured as hydrogen sulfide (H_2S) concentration in ppm by volume (ppmv). Calculations [12] show that fuel gas containing no more than 4000 ppm H_2S will always comply with this emission standard. This is true for all fuel gases, even with no excess air.

Equations to calculate the exhaust gas SO_2 concentrations resulting from the combustion of fuel gas were not included in this permit. Fuel gas with an H_2S concentration of even 10 percent of 4000 ppm is currently not available in Alaska and is not projected to be available during the life of this permit.

Recordkeeping - The permittee is required to record the results of all fuel analysis.

Reporting - The permittee is required to report emissions in excess of the state sulfur dioxide standard and deviations from permit conditions. The permittee is required to include copies of the results of all fuel sulfur analysis with the facility operating report.

Conditions 6 through 9, BACT Emission Limits

Applicability The BACT conditions apply because they were developed during PSD reviews of facility by both the EPA and ADEC. These conditions require the permittee to comply with the emission limits derived from BACT analysis. The permittee may not cause or allow their equipment to violate these limits.

Factual basis: On December 29, 1981, EPA Region 10 issued PSD permit number PSD-X82-01 to Phillips for construction of new equipment at four Kuparuk facilities. EPA twice administratively approved equipment lists under this PSD permit, once on March 23, 1983, and a second June 13, 1984. EPA on October 7, 1997 issued revisions to the EPA PSD

[11] http://www.state.ak.us/dec/dawq/aqm/newpermit.htm

[12] See ADEC Air Permits Web Site at http://www.state.ak.us/dec/dawq/aqm/newpermit.htm, under "Stoichiometric Mass Balance Calculations of Exhaust Gas SO2 Concentration."

permit. The primary revisions include apportionment of field-wide ton per year limits to facility –specific equipment group limits, and updating emission limits based solely on AP-42 factors to the values in the current edition of AP-42.

As part of the EPA process, Phillips demonstrated to Region 10 that on a ton per year basis an overall decrease in allowable emissions would occur under the permit revision. The only exception was an increase in allowable SO2 emissions due to subsequent permitting by the department that raised the SO2 BACT limit established by EPA.

The majority of these changes reflect the revised emission limits granted by EPA on October 7, 1997. The EPA revision established ton per year emission limitations on a group basis for turbines and heaters. For turbines, ton per year emission limits apply for NO_X, CO, SO2, PM, and VOC. Ton per year emissions limits for heaters apply to the same pollutants except there is no limit for VOCs. For NO_X and CO, EPA established BACT emission limits in terms of tons per year as well as other terms (e.g. ppm, lb/MMscf, and lb/MMBtu). Emission limits for SO2, PM, and VOC were established by EPA only in terms of tons per year.

The EPA revisions have been incorporated into Construction Permit No. 171CP01 and this Title V Operating Permit. The permittee is required to calculate and report emission levels for the NO_X, SO2, CO, PM, VOC, and opacity.

Condition 10, NO_X Emission Limit for the Howe-Baker Heater

Applicability: The BACT conditions apply because they were developed during PSD review of facility by ADEC. This condition requires the permittee to comply with the emission limit derived from BACT analysis. The permittee may not cause or allow their equipment to violate this limit.

Factual Basis: This condition was applied to the facility as part of the BACT analysis performed by the department in 1986 but was not incorporated into a permit at that time. The limit is incorporated into construction permit 171CP01 being developed concurrently with this operating permit.

Conditions 11 through 13, Operating Permit Conditions Carried Forward

Applicability The old operating permit 9373-AA006 contained conditions that must be carried forward to this Title V permit. These conditions contain requirements to measure fuel consumption so that emission levels may be calculated, flue gas monitoring for the heaters, and operating hours monitoring for emergency equipment.

Factual Basis: These conditions were applied to the facility as part of the BACT analysis performed by the department.

Condition 14 and 15, Operating Hours for Emergency Equipment

Applicability: The operator has requested these hourly operational limits.

Factual Basis: These conditions limit the hours of operation for source IDs 9 and 10 (fire water pumps) to 200 hours per year for testing and maintenance procedures. The Broach heater Source ID 7 is limited to 2 hours of operation per day on liquid fuel and 6 hours per day on gaseous fuel on a day when liquid fuel is fired.

Condition 16 through 20, NSPS Subpart A Requirements

Applicability: NSPS Subpart A applies to all sources subject to NSPS Subparts Kb (except those subject to recordkeeping only), Dc, and GG. Source ID(s) 1 through 6 are subject to NSPS Subparts GG and, because it was recently replaced with a reconstructed unit, Source ID 1 is subject to the initial performance test requirements of Subpart A. Source ID 13 is a control device (flare) for the slop oil tank (ID 42) and is therefore subject to Subpart A. Source ID(s) 42 is subject to NSPS Subpart Kb, VOC Standard. Source ID 27 is subject to NSPS Subpart Dc. Source ID(s) 28 through 41 are subject to Subpart Kb, Recordkeeping only, and therefore not subject to Subpart A. Subpart A contains the general requirements applicable to all affected facilities (sources) subject to NSPS. In general, the intent of NSPS is to provide technology-based emission control standards. The department has incorporated by reference the NSPS effective July 1, 1999, for specific industrial activities, as listed in 18 AAC 50.040. However, EPA has not delegated to the department the authority to administer the NSPS program.

Factual Basis: Condition 16 requires the permittee to maintain records of malfunctions of NSPS sources or pollution control or monitoring equipment. Condition 17 requires the permittee to conduct an initial NSPS performance test for the reconstructed Source ID 1. Condition 18 requires the permittee to operate NSPS sources in accordance with good air pollution control practices to minimize emissions. Condition 19 prohibits the permittee from using gaseous diluents to achieve compliance with opacity standard. Condition 20 states that any credible evidence may be used to demonstrate compliance or establishing violations of relevant NSPS standards for source ID(s) 1 through 6, 13, 27, and 42.

Condition 21, NSPS Subpart Kb (Recordkeeping Only)

Applicability: NSPS Subpart Kb applies to source that were built or modified after July 23, 1984. Source ID(s) 28 through 41 were built after July 23, 1884. Source ID(s) 28 through 41 have storage capacities of greater than 10,000 gallons and store volatile organic liquids (VOLs) they are subject to only the recordkeeping requirements in Subpart Kb (40 C.F.R. 60.116b(a) & (b).

Factual Basis: This condition incorporates Subpart Kb recordkeeping requirements. Because the condition is a permanent recordkeeping condition, no monitoring or reporting is required to ensure compliance with these federal requirements.

Condition 22, NSPS Subpart Kb VOC Standard

Applicability: Source ID 42 was built or modified after July 23, 1984, and is therefore subject 40 C.F.R. 60, Subpart Kb.

Factual Basis: This condition incorporates NSPS Subpart Kb requirements. The permittee may not cause or allow the equipment to violate these standards. Monitoring, recordkeeping, and reporting requirements are as stated.

Conditions 23 and 25, NSPS Subpart GG Requirements

Applicability: NSPS Subpart GG applies to stationary gas turbines with a heat input at peak load (maximum load at 60 percent relative humidity, 59 degrees F, and 14.7 psi) equal

to or greater than 10.7 gigajoules per hour (10 MMBtu/hr), based on the lower heating value of the fuels fired and constructed, modified, or reconstructed after October 3, 1977. Source ID(s) 1 through 6 were constructed or reconstructed after October 3, 1977 and are therefore subject to NSPS Subpart GG.

Factual Basis: These conditions incorporate NSPS Subpart GG NO_X emission and sulfur compound limits. The permittee may not allow equipment to violate these standards.

NO_X Standard: For a turbine subject to 40 C.F.R. 60.332, the NO_X standard is determined by the following equation:

$$STD_{NOX} = 0.015(14.4/Y) + F$$

where,

STD_{NOX}	=	allowable NO_X emissions (percent by volume at 15 percent oxygen and on a dry basis)
Y	=	manufacturer's maximum rated heat input (kJ/W-hr), or actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the affected facility. The value of Y shall not exceed 14.4 kJ/W-hr
F	=	NO_X emissions allowance for fuel bound nitrogen, percent by volume, **assumed to be zero for Alaska fuel**.

Based on the manufacturer's heat rating at manufacturer's rated peak load, and assuming fuel bound nitrogen of zero, the NO_X standard is 175 ppmv for Source ID(s) 1 & 2, 153 ppmv for Source ID(s) 3 through 5, and 170 ppmv for Source ID 6.

SO_2 Standard: The permittee is required to comply with one or the other of the following sulfur requirements for Source ID(s) 1 through 6 (turbines):

(1) do not cause or allow SO_2 emission in excess of 0.015 percent by volume, at 15 percent O_2 and on a dry basis (150 ppmv), or

(2) do not cause or allow the sulfur content for the fuel burned in Source ID(s) 1 through 6 to exceed 0.8 percent by weight .

Exemptions - Emergency gas turbines,[13] military gas turbines for use in other than a garrison facility, military gas turbines installed for use as military training facilities, and fire fighting gas turbines are exempt from NO_X and sulfur compound emission limit in conditions 23 and 25.

[13] *Emergency Gas Turbine* means any stationary gas turbine that operates as a mechanical or electrical power source only when the primary power source for a facility has been rendered inoperable by an emergency situation, as defined in 40 C.F.R. 60.331(e), effective 7/1/99.

Condition 24, NO_X Monitoring, Recordkeeping, and Reporting

Applicability: Periodic monitoring is included in condition 24. This additional monitoring is necessary to ensure that turbine emissions stay below the NSPS NO_X standard.

Factual basis: The department does not have enough information to make categorical determinations that certain types of turbines, or turbines with emission test results below a certain percentage of the Subpart GG NO_X emission limit will inherently comply with the Subpart GG limit at all times and will never need additional testing. After a sufficient body of NO_X data is gathered under monitoring conditions for compliance with 40 C.F.R. 60, Subpart GG, the department may find that it has enough information to make such categorical determinations. In that event, the department would revise the NO_X monitoring conditions. The department may determine that to assure compliance it is necessary to retain or increase the current monitoring frequency.

These conditions do not include the initial NSPS performance test requirements. Source ID 1 was reconstructed October 2002 and is, therefore, subject to the initial NSPS performance test requirements of 40 C.F.R. 60.8, as stated in condition 17 of the permit.

The intent of these conditions is that turbines or groups of turbines be initially tested on a 5-year cycle. If no testing is required during the permit term, and if the same condition were used in the renewal permit initial testing could be on 10-year testing cycle. After the first testing cycle, the department intends to re-evaluate the necessary monitoring frequency.

The condition does not state how load must be measured. For some turbines it may be possible to directly measure load as either mechanical or electrical output. For others, it may be necessary to calculate load indirectly based on measurements of other parameters. The department is not attempting to dictate what method is most appropriate through the permit condition, but should evaluate the adequacy of methods of calculating load based on the load monitoring proposed by the permittee.

Subpart GG defines “emergency gas turbine” and exempts turbines meeting that definition from the GG emission standards. Some turbines may be operated as standby equipment but not meet the definition of emergency turbine, so the department has added a Method 20 monitoring threshold of 400 hours per 12 month. For turbines expected to operate less than 400 hours the department has also added recordkeeping for hours of operation. The department does not intend to require the permittee to operate a turbine solely for the purpose of testing.

The condition requires testing at a range of loads, consistent with the performance test requirements in Subpart GG, that is, test at 30, 50, 75, and 100% load. If testing at these four loads is not reasonable, the condition allows the permittee to propose to the department what test loads will be reasonable and adequate, and the department will have the responsibility to make a finding on that proposal. If EPA has already approved alternative test loads for the initial performance test the department would allow those test loads if the information that went into that decision were still representative of the turbine operation.

In condition 24.3c(i)(C), the department considers “fuel type” to mean, for liquid fuels a type of fuel as described in an ASTM or similar fuel specification.

Load measurements or load calculations from load surrogate measurements are for one-hour periods. The intent is to match the averaging period for the test method. Method 20

identifies a number of traverse points that vary with the size of the stack. From these points the tester is to choose at least 8 points for NO_X measurements. The time at each point is to be at least one minute plus the average response time of the instrument. The recorded value is the average steady state response. Presumably, the steady state response would exclude some or all of the response time of the instrument. Three runs are to be done at each test load.

The three runs would represent 24 minutes of measurement time or more. A one-hour average load is therefore a reasonable approximation of a load period corresponding to the test method.

Condition 26, Boilers Subject to NSPS Subpart Dc

Applicability: Applies because boiler is subject to NSPS Subpart Dc.

Factual Basis: The condition incorporates the regulatory requirement for Dc boilers burning gas fuel. The permittee must keep records of the amount of fuel used by the boiler.

Condition 27, NESHAPS Applicability Determinations

Applicability: The permittee has the responsibility to determine if specific federal regulations apply to its facilities.

Factual basis: The permittee has conducted an analysis of the facility and determined that they are not a major HAPs facility based on emissions. Even if they were classified as a major facility Subpart HH would not apply because of the "black oil" exemption contained in those regulations for crude oil production facilities. This condition requires the permittee to keep and make available to the department copies of the major facility determination.

Conditions 28 & 29, Halon Prohibitions

Applicability: These prohibitions apply to all facilities that use halon for fire extinguishing and explosion inertion. The Phillips' Kuparuk CPF# 3 does use halon.

Factual basis: These conditions incorporate applicable 40 CFR 82 requirements. The permittee may not cause or allow violations of these prohibitions. No additional MR&R requirements are required to ensure compliance with these federal requirements.

Conditions 30 through 33, (Section 12) Insignificant Sources

Applicability: These general emission standards apply to all industrial processes fuel-burning equipment, and incinerators regardless of size.

Factual basis: Conditions 30 through 33 require the permittee to comply with the general standards for insignificant sources. The permittee may not cause or allow their equipment to violate these standards. Insignificant sources are not listed in the permit unless specific monitoring, recordkeeping and reporting are necessary to ensure compliance.

In accordance with the recently adopted regulations, 18 AAC 50.346(b)(1), 5/03/02, standard operating condition for Insignificant Sources also applies to sources that do not have control equipment for complying with an emissions standard or reducing emissions below a threshold in 18 AAC 50.335(r). This case applies to Source ID 7, the MR&R being that the

unit remain in compliance with its operating hours limit and the permittee annually certifies compliance with the opacity and particulate matter standards.

Condition 34, Asbestos NESHAP

Applicability: The asbestos demolition and renovation requirements apply if the permittee engages in asbestos demolition or renovation.

Factual Basis: The condition requires the permittee to comply with asbestos demolition or renovation requirements in 40 C.F.R. 61, Subpart M. Because these regulations include adequate monitoring and reporting requirements and because the permittee is not currently engaged in such activity, simply citing the regulatory requirements is sufficient to ensure compliance with these federal regulations.

Condition 35, Refrigerant Recycling and Disposal

Applicability: Applies if the permittee engages in the recycling or disposal of certain refrigerants.

Factual Basis: The condition requires the permittee to comply with the specified standards for recycling and emission reduction of refrigerants set forth in 40 C.F.R. 82, Subpart F, that will apply if the permittee uses certain refrigerants. Because these regulations include adequate monitoring and reporting requirements and because the permittee is not currently engaged in such activity, simply citing the regulatory requirements is sufficient to ensure compliance with this federal regulation.

Condition 36, Good Air Pollution Control Practice

Applicability: Applies to all sources, except NSPS regulated sources, i.e. except to Source IDs 1 through 6, 13, 27 and 42.

Factual basis: The condition requires the permittee to comply with good air pollution control practices for all sources.

Maintaining and operating equipment in good working order is fundamental to preventing unnecessary or excess emissions. Standard conditions for monitoring compliance with emission standards are based on the assumption that good maintenance is performed. Without appropriate maintenance, equipment can deteriorate more quickly than with appropriate maintenance. If appropriate maintenance is not applied to the equipment, the department may have to apply more frequent periodic monitoring requirements (unless the monitoring is already continuous) to ensure that the monitoring results are representative of actual emissions.

The permittee is required to keep maintenance records to show that proper maintenance procedures were followed, and to make the records available to the department. The department may use these records as a trigger for requesting source testing if the records show that maintenance has been deferred.

Condition 37, Open Burning

Applicability: The open burning state regulation in 18 AAC 50.065 applies to the permittee if the permittee conducts open burning at the facility.

Factual Basis: The condition requires the permittee to comply with the regulatory requirements when conducting open burning at the facility.

No specific monitoring is required for this condition. More extensive monitoring and recordkeeping is not warranted because the permittee does not conduct open burning as a routine part of their business. Also, most of the requirements are prohibitions, which are not easily monitored. Additional monitoring is achieved through condition 41, which requires a record of complaints. Therefore, the department does not believe that additional monitoring is warranted.

Condition 38, Reasonable Precautions to Prevent Particulate Matter from Becoming Airborne.

Applicability: Bulk material handling requirements apply to the permittee because the permittee will engage in bulk material handling, transporting, or storing; or will engage in industrial activity at the facility.

Factual Basis: The underlying regulation, 18 AAC 50.045(d), requires the permittee to take reasonable action to prevent particulate matter (PM) from being emitted into the ambient air. Monitoring consists of an annual certification.

Condition 39, Dilution

Applicability: This state regulation applies to the permittee because the permittee is subject to emission standards in 18 AAC 50.

Factual Basis: The condition prohibits the permittee from diluting emissions as a means of compliance with any standard in 18 AAC 50.

Condition 40, Stack Injection

Applicability: Stack injection requirements apply to the facility because the facility contains a stack or source constructed or modified after November 1, 1982.

Factual Basis: The condition prohibits the permittee from releasing materials other than process emissions, products of combustion, or materials introduced to control pollutant emissions from a stack (i.e. disposing of material by injecting it into a stack). No specific monitoring for this condition is practical. Compliance is ensured by inspections, because the source or stack would need to be modified to accommodate stack injection.

Condition 41, Air Pollution Prohibited

Applicability: Air Pollution Prohibited requirements apply to the facility because the facility will have emissions.

Factual Basis: The condition prohibits the permittee from causing any emission which is injurious to human health or welfare, animal or plant life, or property, or which would unreasonably interfere with the enjoyment of life or property. While the other permit

conditions and emissions limitation should ensure compliance with this condition, unforeseen emission impacts can cause violations of this standard. These violations would go undetected except for complaints from affected persons. Therefore, to monitor compliance, the permittee must monitor and respond to complaints.

The permittee is required to report any complaints and injurious emissions. The permittee must keep records of the date, time, and nature of all complaints received and summary of the investigation and corrective actions undertaken for these complaints and to submit copies of these records upon request of the department.

The department will determine whether the necessary actions were taken. No corrective action are necessary if the complaint is frivolous or there is not a violation of 18 AAC 50.110, however this condition is intended to prevent the permittee from prejudging that complaints are invalid.

Condition 42, Technology-Based Emission Standard

Applicability: Technology Based Emission Standard requirements apply to the facility because the facility contains equipment subject to a technology-based emission standard, such as BACT, MACT, NSPS or other "technologically feasible" determinations.

Factual Basis: The permittee is required to take reasonable steps to minimize emissions if certain activity causes exceedance of any technology-based emission standard in this permit. The conditions of this permit list applicable technology-based emission standards and require excess emission reporting for each standard in accordance with condition 58. Excess emission reporting under condition 58 requires information on the steps taken to minimize emissions, the report required under condition 58 is adequate monitoring for compliance with this condition.

Condition 43, Permit Renewal

Applicability: Applies if the permittee intends to renew the permit.

Factual Basis: The permittee is required to submit an application for permit renewal by the specific dates applicable to Kuparuk Central Production Facility #3 as listed in this condition. Monitoring, recordkeeping, and reporting for this condition consist of the application submittal. No additional requirements are necessary to ensure compliance with this condition.

Condition 44, Requested Source Tests

Applicability: Applies because this is a standard condition to be included in all permits.

Factual Basis: The permittee is required to conduct source tests as requested by the department. Monitoring consists of conducting the requested source test, and no recordkeeping or reporting requirements are necessary to ensure compliance with this condition.

Conditions 45 through 48, Operating Conditions, Reference Test Methods, Particulate Matter Calculations, Excess Air Requirements

Applicability: Applies because the permittee is required to conduct source tests by this permit.

Factual Basis: The permittee is required to conduct source test as set out in conditions 45 through 48. These conditions supplement the specific monitoring requirements stated elsewhere in this permit. The test reports required by condition 52 adequately monitor compliance with conditions 45through 48, therefore no additional MR&R requirements are necessary to ensure compliance with these conditions.

Conditions 49 through 52, Test Deadline Extension, Test Plans, Notification and Reports

Applicability: Apply because the permittee is required to conduct source test by this permit.

Factual Basis: Standard conditions 18 AAC 50.345(l) - (o) are incorporated through these conditions. Because these standard conditions supplement specific monitoring requirements stated elsewhere in this permit no MR&R is required. The source test itself is adequate to monitor compliance with this condition.

Condition 53, Test Exemption

Applicability: Applies when the source exhaust is observed for visible emissions.

Factual Basis: As provided in 18 AAC 50.345(a), 5/03/02, the requirements for test plans, notifications and reports do not apply to visible emissions observations by smoke readers, except in connection with required particulate matter testing.

Condition 54, Certification

Applicability: This is a standard condition to be included in all permits. Applies because every permit requires the permittee to submit reports.

Factual Basis: This condition requires the permittee to certify all reports submitted to the department. To ease the certification burden on the permittee, the condition allows the excess emission reports to be **certified** with the facility report, even though it must still be **submitted** more frequently than the facility operating report. This condition supplements the reporting requirements of this permit, therefore no additional MR&R is necessary to ensure compliance with this condition.

Condition 55, Submittals

Applicability: Applies because the permittee is required to send reports to the department.

Factual Basis: This condition requires the permittee to send submittals to the address specified in this condition. Receipt of the submittal at the correct department office is sufficient monitoring for this condition. This condition supplements the reporting requirements of this permit, therefore no additional MR&R is necessary to ensure compliance with this condition.

Condition 56, Information Requests

Applicability: Applies to all permittees, and incorporates a standard condition

Factual Basis: This condition incorporates a standard condition in regulation, which requires the permittee to submit information requested by the department. Receipt of the requested information is adequate monitoring.

Condition 57, Recordkeeping Requirements

Applicability: Applies because the permittee is required by the permit to keep records.

Factual Basis: The condition restates the regulatory requirements for recordkeeping, and supplements the recordkeeping defined for specific conditions in the permit. The records being kept provide adequate evidence of compliance with this requirement, therefore, no additional MR&R is required.

Condition 58, Excess Emission and Permit Deviation Reports

Applicability: Applies when the emissions or operations deviate from the requirements of the permit.

Factual Basis: This condition satisfies two state regulations related to excess emissions - the technology-based emission standard regulation and the excess emission regulation. Although there are some differences between the regulations, the condition satisfies the requirements of each regulation.

The condition does not mandate the use of the department's reporting form, but it does specify that the information listed on the form must be included in the report.

The reports themselves and the other monitoring records required under this permit provide an adequate monitoring of whether the permittee has complied with the condition. Therefore, no additional MR&R is necessary to ensure compliance with this condition. Please note that there may be additional federally required excess emission reporting requirements.

Condition 59, NSPS and NESHAP Reports

Applicability: Applies to facilities subject to NSPS and NESHAP federal regulations.

Factual Basis: The condition supplements the specific reporting requirements in 40 C.F.R. 60 and 40 C.F.R. 61. The condition does not need any MR&R. The reports themselves are adequate monitoring for compliance with this condition.

Condition 60, Facility Operating Reports

Applicability: Applies to all permits.

Factual Basis: The condition restates the requirements for reports listed in regulation. The condition supplements the specific reporting requirements elsewhere in the permit and does not need any MR&R. The reports themselves are adequate monitoring for compliance with this condition.

Condition 61, Annual Compliance Certification

Applicability: Applies to all permittees.

Factual Basis: This condition specifies the periodic compliance certification requirements, and specifies a due date for the annual compliance certification. Because this requirement is a report, no MR&R is needed.

Conditions 62 through 68, Standard Conditions

Applicability: Applies because these are standard conditions to be included in all permits.

Factual Basis: These are standard conditions required for all operating permits.

Condition 69, Permit Shield

Applicability Applies because the permittee has requested a shield for the applicable requirements listed under this condition.

Factual Basis: Condition 69 sets forth the requirements that the department determined were not applicable to the facility, based on the permit application, past operating permit, construction permits and inspection reports.

Table F below identifies application shield requests that were denied, and the reason they were denied.

Table F - Permit Shields Denied

Shield requested for:	Reason for shield request:	Reason for request denial:
Drill Site Heaters H-3F01, H-3L01, and H3T01		
All Requirements	H-3F01: Unit has been removed from the site. H-3L01, H-3T01: Units were never installed.	These sources are not listed on the source inventory and are not the subject of this permit.
Storage Tank: T-3R01		
All Requirements	Unit has been removed from the site and relocated to the CPF#1 Recycle Facility	This unit has been removed from the drill site and therefore is not subject to this permit.

Shield requested for:	Reason for shield request:	Reason for request denial:
Facility-Wide		
18 AAC 50.045(b) - Prohibitions	The permit implements all applicable air quality requirements for the facility. Since compliance with the permit will constitute compliance with applicable local, state, or federal air quality laws, this requirement is not applicable to the facility.	This regulation is an ongoing obligation for all facilities located within Alaska and cannot be shielded. There is no triggering event which that activates this requirement.
18 AAC 50.045(c) - Prohibitions	This requirement will be implemented through 18 AAC 50.201, which is otherwise addressed in the permit. This requirement is not applicable because the department will impose any special requirements to protect ambient air quality through permit conditions adopted under 50.201.	This regulation is an ongoing obligation for all facilities located within Alaska and cannot be shielded. There is no triggering event which that activates this requirement.
AQC Permit 9373-AA006 Condition 2	The proposed Title V permit Conditions have included the most stringent applicable emission standards. This requirement is no longer needed.	The permit shield only applies to state statutes, regulations, and the Clean Air Act (18 AAC 50.335(l)).
AQC Permit 9373-AA006 Condition 3	This requirement expired on 11/11/95. Condition no longer applicable.	The permit shield only applies to state statutes, regulations, and the Clean Air Act (18 AAC 50.335(l)).
AQC Permit 9373-AA006 Condition 8 and Exhibit D, item 4	The requirement to calculate and report monthly *SO2* emissions was, instituted in response to ADEC's concern that increasing sulfur in fuel content due to reservoir aging could cause a PSD modification. ADEC has previously granted PAI's requests to remove this condition from the permits of other PAI facilities.	The permit shield only applies to state statutes, regulations, and the Clean Air Act (18 AAC 50.335(l)).
AQC Permit 9373-AA006	These permit conditions are	The permit shield only applies

Shield requested for:	Reason for shield request:	Reason for request denial:
Conditions 1, 4, 9-12, 15-17, 20	not “facility-specific" requirements" Therefore, they are not required to be identified in the Title V permit application [ref. 18 AAC 50.335(e)(5)]	to state statutes, regulations, and the Clean Air Act (18 AAC 50.335(l)).
Flares		
18 AAC 50.055(b)(1) - Particulate matter emitted from an industrial process or fuel-burning equipment	Alaska SIP – “Due to the extreme difficulty and questionable validity of performing source tests on the exhaust plume of fuel burning flares for particulate and sulfur dioxide emissions, the emissions limitations identified in 18 AAC 50.050(b) and 50.050(c) [now 50.055(b) and 50.055(c) in the current regulations] do not apply to fuel-burning flares" (Page IV, G, 2-4)	The exemption (rev. 11/84) cited is not part of the federally approved state air quality control plan. The last time the cited section was approved by the EPA was in 1983. Therefore, the emission standards apply federally but are exempted by state regulation.
18 AAC 50.055(c) –Sulfur compounds emitted from an industrial process or fuel-burning equipment		

Conditions 70 through 72, (Section 13) Visible Emissions and PM Monitoring Plan

Applicability: Applies because these conditions detail the monitoring, recordkeeping, and reporting required in conditions 3 and 4.

Factual Basis: Each permit term and condition must include MR&R requirements showing verifiable compliance with each permit term and condition. The permittee must establish by actual visual observations which can be supplemented by other means, such as a defined Facility Operation and Maintenance Program, that the facility is in continuous compliance with the State's emission standards for visible emissions and particulate matter. The correlation between particulate matter and visible emissions that is the basis for this monitoring procedure is discussed under conditions 3 and 4.

These conditions detail a stepwise process for monitoring compliance with the State's visible emissions and particulate matter standards for liquid fired sources. Equipment types covered by these conditions are internal combustion engines, turbines, heaters, boilers, and flares. Initial monitoring frequency schedules are established along with subsequent reductions or increases in frequency depending on the results of the self-monitoring program.

Monitoring frequencies for hydrocarbon fuels are detailed in these conditions.

Reasonable action thresholds are established in these conditions that require the permittee to progressively address potential visible emission problems from sources either through maintenance programs and/or more rigorous tests that will quantify whether a specific emission standard has been exceeded.

Condition 73, (Section 13) Visible Emissions for Flares

Applicability: Applies because this condition details the monitoring, recordkeeping, and reporting required in condition 3 for gas-fired flares

Factual Basis: Condition 73 was developed to provide a standardized version of flare monitoring that is not dependant upon the type or design of upstream equipment. It has been claimed that gas-fired flares normally burn without emitting visible emissions, but actual field data demonstrating this assumption is not available in all cases. However, gas-fired flares have been shown to smoke when a control device, i.e. a knockout drum, flare scrubber, gas or steam assist, or vapor recovery system malfunctions. Thus, the condition sets out a protocol to collect actual field data to determine compliance with the 20% opacity standard for flares.

A recent department analysis of industry flaring operations indicates that 49% of the gas flared (by volume) is for pilot/purge, 25% is for flaring less than one hour, and 26% is for flaring that lasts more than one hour. Pilot/purge flaring constitutes half of all flaring by volume and is continuous in nature and can be observed at any time. This type of flaring has not caused violations of the opacity standard in the past and can be checked at any time by agency inspectors. The remaining half of the flaring volume is split evenly between less than and greater than one hour duration. Therefore, the monitoring scheme in this condition addresses the half of the non-continuous flaring operations that are scheduled and for which a certified observer can reasonably be located onsite.

Since it is impractical to require facilities to have a certified Method-9 opacity reader on site for unpredictable emergency flaring, the monitoring protocol requires Method-9 readings only during scheduled flare events. Scheduled events such as those generated by maintenance activities and well testing of greater than one-hour in duration will be observed. These one-hour events are currently quantified and reported to the Alaska Oil and Gas Conservation Commission for other reasons and thus provides a confirming information record of the occurrence of these events. Only those events as defined in the condition need to be monitored. If no events meeting this definition occur during the life of the permit then no monitoring is required.

Since only flaring that is scheduled and exceeds one hour is required to be observed operators will have time to provide certified Method-9 readers onsite. Most oil and gas production facilities in Alaska are located at remote sites so it is not reasonable to self-monitor all or even a large sample of the flaring that occurs. Data collected from planned

events will help the department refine this monitoring scheme during future permit cycles. Process upsets and emergency events that may or may not exceed one hour occur randomly and do not lend themselves easily to periodic monitoring. At this time, the department will rely on facility excess emission reports, citizen complaints, and agency inspections for information concerning these short term and emergency events.